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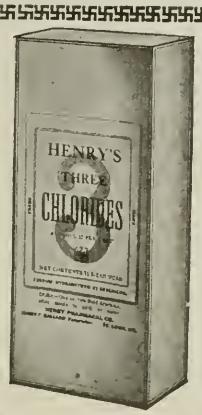

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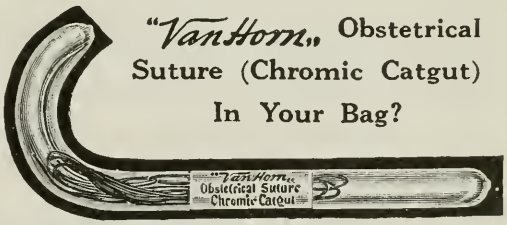

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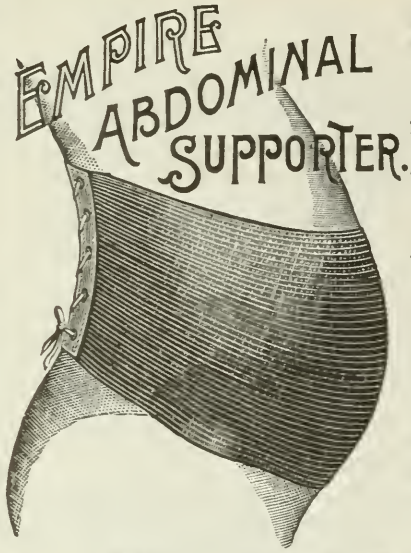

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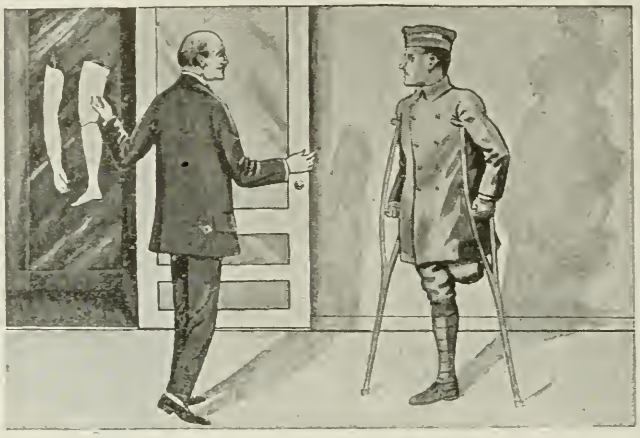

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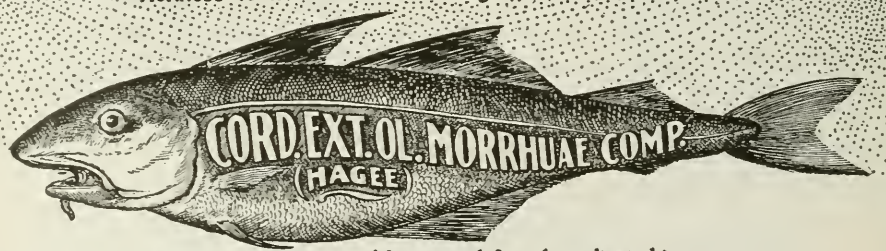

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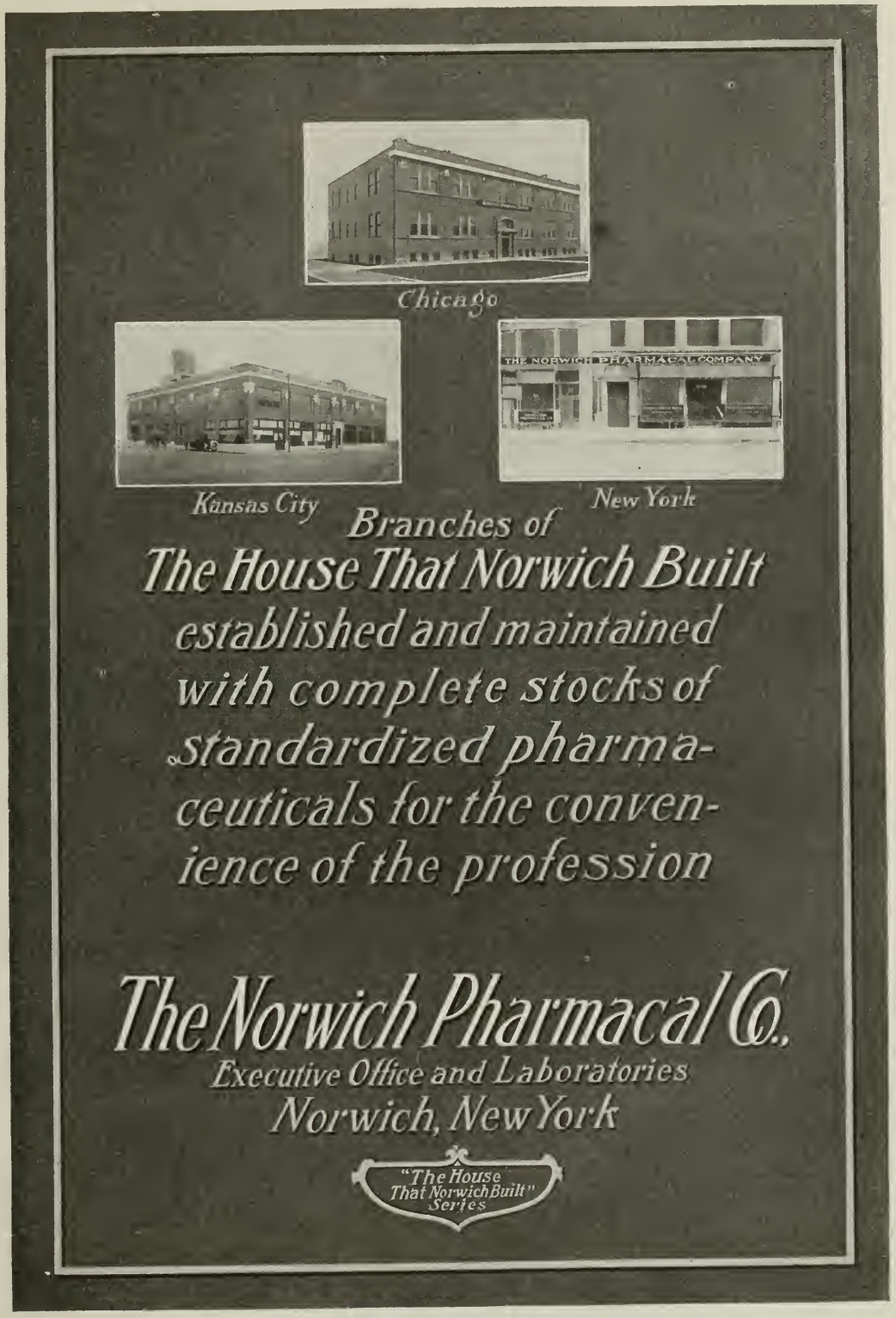
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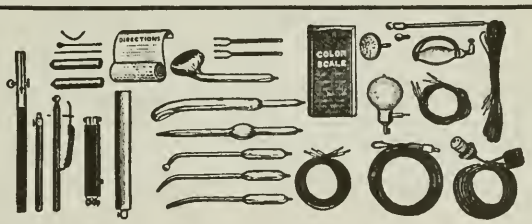

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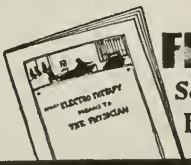

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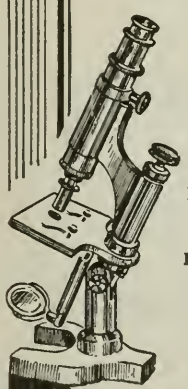

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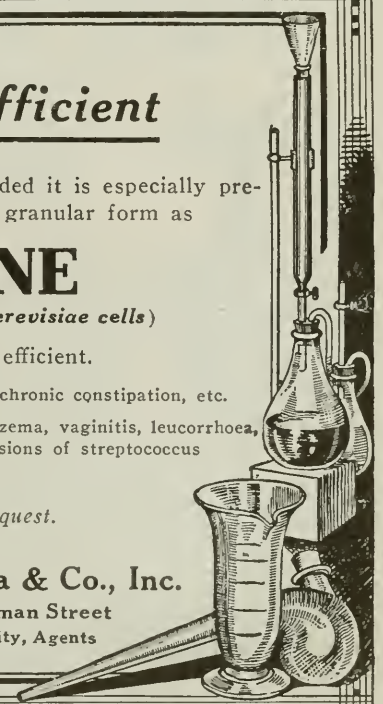

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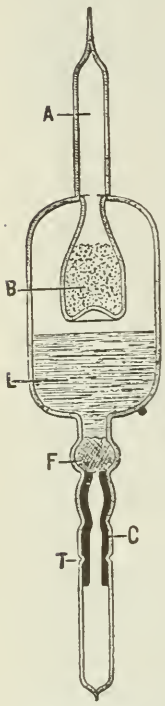

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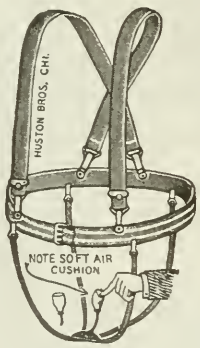

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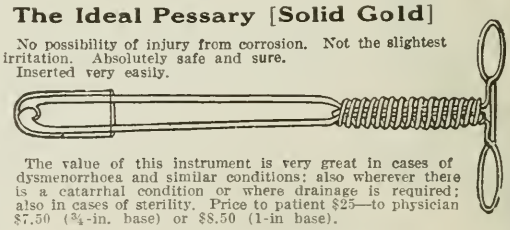

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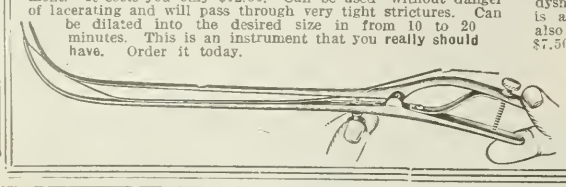

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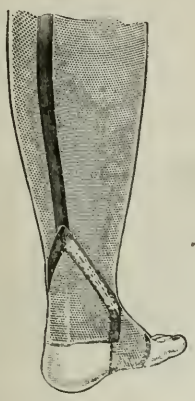

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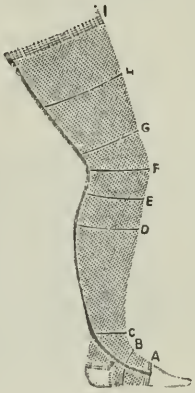

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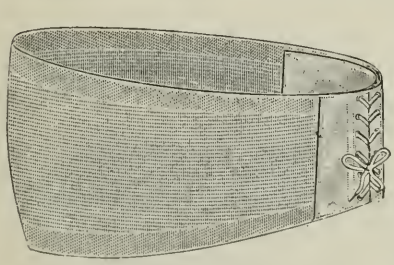

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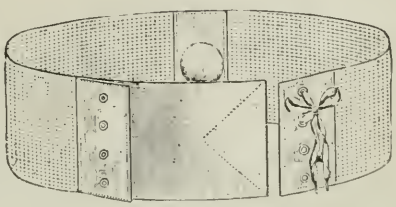

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All the benefits and none of the disadvantages of non-specific protein therapy are obtained by a combination of vegetable proteins, lipoids, plant enzymes, vitamines, etc., known as

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Proteogen No. 12, designed especially for the treatment of Influenza and Pneumonia has given remarkable results in the hands of hundreds of physicians in various sections of the United States. The injection of these proteins is free from danger. It is practically painless and when the proper technique is employed very rarely causes any reaction whatever.

We shall be glad to send a collection of case reports showing the remarkable results obtained in the treatment of Influenza and Pneumonia by the injection of Proteogen No. 12 without the use of any of the depressing synthetics or opiates which have been so generally and disastrously resorted to in the treatment of these diseases.

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The American Journal of
CLINICAL MEDICINE
Dependable Therapeutic Fact for Daily Use

Vol. 27, No. 3 March, 1920

The After-Treatment of Influenza

LIKE all other acute infectious diseases, influenza, especially that form of the affection that was pandemic a year ago and is again demanding many victims at the present time, leaves the convalescent patients in a decidedly subnormal physical condition. In addition to this, we have seen, in the course of the past year, numerous reports of sequelæ in which the nervous system and the mentality of the patients were impaired considerably in consequence of the serious bacterial intoxications to which they had been subjected.

After an attack of an infectious disease such as typhoid fever, scarlet fever, influenza, pneumonia, and so on, physician and relatives naturally feel relieved and cheerful, once the danger period has passed, and are prone to trust that with, time and good care, the patient will be restored to his full working capacity. Often, this is actually the case; in many instances, though, there remains a deficiency and weakness, a something that seems to prevent complete restoration. Whether such more or less serious symptoms of unfavorable results are manifest or not, it is the duty of the physician to bend every effort to secure for his patients a complete recovery of health.

In most cases, it hardly will do to trust to time or to rest, good feeding and so forth. Usually, active measures are required to enable the blood, which has been put under a terrific strain during the acute attack, to regain its normal condition so that it shall be able to take care of any physical anomalous conditions that may have remained. As Dr. Otto Lerch points out forcibly in his treatise on "Rational Therapy", all diseases must be treated through the blood and their cure depends upon the condition of that tissue. This, after all, is a self-evident proposition. It is the blood, through its white cells, that mainly resists the invasion of the body by bacteria and that attempts to render those bacteria that have reached the tissues or the circulation harmless by subjecting them to phagocytosis. The entire immunization

process, as it takes place automatically in the infected organism, depends upon the vigor of the blood cells and upon the efficiency of the circulatory apparatus. The role of fixed tissue cells, like endothelial cells, important though it may be, for instance, in the development of "tubercles", still is subordinate to that of the leukocytes and phagocytes.

Just as during the entire course of a disease, more particularly an acute febrile disease, it is of primary importance to maintain the circulation and the efficient functioning of the entire hematopoietic system, so it is essential, after the organism has gained the victory over the bacterial enemy, that it be restored to normal and that permanent injury be prevented by all means at our disposal.

At first sight, it seems as though the answer to this problem is simple enough. It usually is held to be comprised in the administration of "tonics". Tonics include within their list a variety of remedies, or chemical substances, some of which supply needed iron to the debilitated system, while others furnish the various mineral salts upon the supply of which, in the system, an unusual demand was made during the illness. Still others might be called more properly stimulants, and it is intended with their aid to energize the nerves governing, for instance, the hematopoietic system as well as other tissues in the body and to enable them to accomplish a greater amount of work. The simplest tonics, finally, properly belong among the foods and may be designated as food tonics.

Among the remedies to which we have referred just now, there are, of course, such substances as iron, arsenic, manganese; then the hypophosphites; further, strychnine and other stimulants, and, finally, codliver oil, extract of malt and similar nutrient tonics.

In addition to the substances enumerated, nuclein in its various forms has been found of excellent service; not only during the duration of infectious diseases, for the purpose of enhancing and strengthening the antibacterial resistance and the process of self-immunization, but, also, during convalescence through supplying in readily assimilated form the element phosphorus of which the organism is in great need.

In accordance with recent investigations, we can not but assume what Sajous, among others, has long asserted, namely, that the internal-secretion apparatus, or the endocrine glands, of the body are of considerable importance both with reference to the organic resistance to disease, especially infectious or bacterial disease, and also during the process of restoration, or convalescence. It is wise, therefore, to keep it in mind that certain endocrinous substances and remedies may be employed rationally and wisely for the purpose of stimulating certain reparative processes and of assuring a speedy recovery of complete health.

It would be interesting to know the remedies to which physicians usually resort by way of after treatment in a case of convalescence from serious illness. We should like to learn by direct communication from our readers what they prescribe by way of "tonics" and to what in addition to food, rest and time they trust in bringing about a "cure".

I should not have the least idea how to get along with everlasting felicity, if it did not offer me new tasks and difficulties to overcome.—Goethe.

EPIDEMIC LETHARGIC ENCEPHALITIS

The medical profession is well acquainted with the African disease called sleeping sickness. It is parasitic. It is almost always fatal and the patients pass away in a state of coma.

In 1917, Von Economo, of Vienna, reported a number of cases resembling this condition and called the malady lethargic encephalitis; he believed that the symptoms were due to a virus similar to, while not identical with, those of poliomyelitis.

Abrahamson prefers the name epidemic polioencephalitis, because nuclear involvement dominates the pathological picture, and also because lethargy is not an invariable symptom. The term lethargic encephalitis is ill advised, says Wilson, because it is not the encephalitis but the patient suffering from it, that is lethargic.

In *Minnesota Medicine* (Feb.) there is a paper by Dr. C. Eugene Riggs on the subject referred to. The writer states that there have occurred at least five epidemics of this disease, which have usually been associated with pandemics of influenza. The encephalitis may occur during or, as usually happens, after attacks of influenza, and there is no infectious agent so

inimical to the nervous system as that of influenza.

Epidemic encephalitis occurs at all ages and affects both sexes about equally, infants, children and adults being attacked in like number. The seasonal incidence of the disease, spring and winter, is an aid to diagnosis. It is infectious. The incubation period may be from a few days to three weeks. The onset is gradual. The lethargic state lasts from a few days to several weeks. The patient's response to questions during this time is clear and accurate.

The causal agent of the disease is not known with certainty. The researches of Loewe and Strauss indicate the presence of an organism similar to that described by Flexner and Noguchi as occurring in poliomyelitis. It is found in the nasopharyngeal mucus of the patients.

Loewe and Strauss have succeeded in inoculating monkeys with this virus producing an exact clinical and pathological picture of the affection. It is an infectious encephalitis, entering by means of the nasopharynx into the lymph channels, to the vessels of the base of the brain, involving the brain stem, ganglia and cortex; also the upper cord, meninges, and nerves.

According to Wilson, the macroscopic changes on the cranial surface are slight. There is meningeal congestion, with patches of localized meningitis and limited areas of subpial hemorrhagic effusion; also, both gray and white matter are the seat of minute hemorrhages, scattered irregularly, diffuse and of variable distribution.

While complete recovery is the rule, yet, they are instances in which the patient is left with an impaired mentality, with permanent cranial palsies, with paralysis of spinal origin and athetosis (British report). The same precautions should be observed as in epidemic poliomyelitis.

In October, 1918, a committee of the Royal Medical Society, of which Doctor Osler was a member, reported that, in their study of lethargic encephalitis, they did not get any picture resembling poliomyelitis and that the disease differed from all analogous conditions. It is the consensus of opinion that there is no relation between lethargic encephalitis and influenza.

Since we do not know the nature of the infection, treatment must necessarily be unsatisfactory. Changes for the better may set in abruptly. Good nursing and free alimentation, using the nasal tube if occasion requires, are perhaps the most important measures. For the control of the choreiform movements and tremor, Bassoe advises scapolamine hydrobromide. Lumbar puncture should be resorted to, as an aid to diagnosis. If there is increased pressure of the spinal fluid, daily withdrawal is indicated.

The strongest man in the world is he who stands alone.—Ibsen.

PROHIBITION AND PRESCRIBING

The constitutional amendment prohibiting the manufacture and sale of intoxicating liquors in the United States affects the physician very vitally. Even in the practice of his profession, his use of alcohol is hedged about with many conditions and restrictions. For instance:

Every physician who desires to prescribe intoxicating liquor must procure a permit from the Commissioner of Internal Revenue on Form 1104.

He may prescribe intoxicants only for persons upon whom he is in personal attendance "if, after careful physical examination of such persons, or, in cases where such examination is impracticable, upon the best information obtainable, the physician believes that the internal or external use of such liquor as a medicine by such persons is necessary and will afford relief to them from some known ailment."

He may not prescribe a greater quantity of intoxicating liquor than is necessary for use as a medicine by the person for whom it is prescribed. "In no case may spirituous liquor in excess of one pint, in any period of ten days, be prescribed for the same person by one or more physicians."

"He may administer intoxicating liquor directly to his patient for medicinal purposes" in cases where the use of such liquor is believed necessary to afford relief from some known ailment and delay in procuring the same through a retail pharmacist upon a prescription might result in loss of life, aggravation of the ailment, or intense suffering."

He may obtain not more than six quarts of liquor during any calendar year, and this for medicinal purposes only.

His prescriptions for an intoxicating liquor can be filled only by a pharmacist.

and no prescription may be filled more than once.

All prescriptions for intoxicating liquor must be made upon Prescription Form 1403, and these prescription blanks are furnished by the Commissioner of Internal Revenue in book form, serially numbered.

Every physician who prescribes intoxicating liquor is required to keep a record on Book Form 1402. He must have an alphabetically arranged record of every prescription for intoxicating liquor issued by him, "showing the date of the prescription, the amount and kind of liquor prescribed, the name of the patient to whom issued, the purpose or ailment for which prescribed, and the directions for use thereof, including the amount and frequency of the dose."

The Government will keep a record on Form 1416 of all prescription books issued to physicians and the attached stubs, which must be returned to them by physicians when the prescriptions in these books are used up.

Not only are various intoxicating beverages as such included under the prohibition restrictions, but many legitimate medicinal preparations are held to be fit for beverage purposes, among these, the following U. S. P. and N. F. articles:

Aromatic Elixir
Elixir of Licorice
Compound Spirits of Juniper
Compound Tincture of Cardamon
Compound Tincture of Lavender
Blackberry Cordial
Elixir of Anise
Red Aromatic Elixir
Elixir of Bitter Orange
Compound Elixir of Cardamon
Compound Elixir of Taraxacum
Compound Spirits of Myrcia
Aromatic Tincture
Tincture of Caramel
Compound Wine of Orange
Wine of Wild Cherry
Aromatic Elixir of Glycyrrhiza
Bitter Tincture.

Physicians should remember that the manufacturer is required to secure permits from the Government (on Form 1404) for the sale of medicinal preparations containing alcohol; otherwise such preparations would be considered as beverages.

Physicians shall likewise warn their patients that all antiseptic solutions containing alcohol, and toilet preparations, such as lotions, hair tonics, colognes and perfumes must hereafter be medicated in such a way as to prevent their use as beverages; for instance, toilet preparations, including bay rum, intended for external use only, will be made undrinkable by the addition of tartar emetic in the proportion of 32 grains to the gallon.

We have touched lightly, as time and space permit, upon some of the applications of the law as it affects us, directly. Every doctor, however, should familiarize himself with the law and its interpretations. These are set forth in Regulations 60 of the Bureau of Internal Revenue, Office of Federal Prohibition Commissioner. Write to your nearest Internal Revenue Collector or to the Commissioner of Internal Revenue for a copy.

If I had to choose a religion, I think I should be a worshipper of the sun. The sun gives to all things life and fertility. It is the true God of the earth.—Napoleon.

KEEP YOUR WAR RISK INSURANCE

Doctors who were in the service may be familiar with the recent rulings affecting the reinstatement of lapsed war risk insurance; but, they are worth repeating.

There is no better insurance than that offered to service men by the United States government. It is true that the Bureau of War Risk Insurance has, in the past, been handicapped by red tape, unfavorable legislation, and the lack of proper executive help. This has caused any amount of confusion and led to the impression, on the part of many, that war risk insurance was not worth bothering with, anyway, and that, probably, there would be the same difficulty about the payment of claims. This impression is erroneous. The Bureau of War Risk Insurance has done a tremendous amount of work with very meager facilities. During the war, the Bureau was months and months behind in both correspondence and payments. In fact, it was literally swamped. However, the Bureau force is now catching up. A new manager has been installed who is, as far as permitted, making a good record. Legislation favorable to government insurance is pending; there is every indication that this legislation will become effective in the near future. Under the new laws, government insurance will be paid in full to the estate of the insured at the time of death instead of being strung out over a

period of twenty years as is now the case.

We call attention to these facts as a word of encouragement to those doctors who, having been in the service, may have permitted their insurance to lapse, either by carelessness or with the intention of relinquishing it altogether. It is now provided that lapsed or canceled war-term insurance may be reinstated within eighteen months from date of discharge upon payment of only two months' premiums on the amount of insurance to be reinstated, providing the insured is in as good health as at the date of discharge, and so states in his application.

It is evident that this provision does not protect a man until he actually reinstates. If he waits, he may not be in as good health as he was at the time of discharge and, consequently, may not be able to secure reinstatement. Therefore, we urge any doctors who may be affected by this ruling to take advantage of it themselves and to recommend to all exservice men with whom they come in contact that their war risk insurance be held if paid up and reinstated if lapsed.

Present terms covering conversion of war risk insurance into various forms of policies with rates will be supplied on application to R. G. Cho'meley-Jones, director of Bureau of War Risk Insurance or by writing to the Editor of this Journal.

Precept is instruction written in the sand, the tide flows over it and the record is gone. Example is graven on the rock.—Channing.

WHY SOME DOCTORS ARE "HARD UP"

Once in a while, we print an editorial from another journal, for the reason that the other fellow has said the thing better than we could say it ourselves. This time, we have borrowed from *Patchwork*, the able little publication issued by the E. L. Patch Company, pharmaceutical manufacturers, of Boston, Massachusetts. Here it is:

"A Brooklyn physician sent us a clipping from the bulletin of the Lawrence County Medical Society. It contains some cuss words—words, we were told, when we were young, it was not nice to use. But, the author evidently had reasons for calling strong language to his aid—or thought he had. If you are a doctor you may know whether he was justified or not. He said:

" 'The average man will give an attorney from three to five thousand dollars, together with a life time of praise, to keep him out of the penitentiary for from two to ten years, yet, at the same time, will raise a phosphorescent glow and a kick that can be heard around the world if a doctor charges him fifty or a hundred dollars to keep him out of Hell for a lifetime. We are the only people, under God's ethereal tent today, who keep open shop for twenty-four hours a day, for three hundred and sixty-five days each year. We also are the only laborers who keep on working for people who do not pay.'

"After reading that, it flashed into our mind that one difference between the attorney and the doctor is that, while the attorney presents a bill pretty promptly, with a statement the first of each month, to his client, most doctors make no real effort to collect the money due them. The specialists, with offices in the city, are an exception to this condition. They employ bookkeepers and send a bill and statement each month, with the result that they collect a large part of the money due them.

"One physician told one of our salesmen during the month of May that he was hard pressed financially and that he had not yet sent out his January bills.

"We wonder if there isn't, in the town of that physician, some young lady who could be easily trained to keep the doctor's books for him and see that statements were sent out promptly the first of each month. Such a person need put in only a part of her time at the doctor's office.

"As a matter of fact, a great many country physicians would be much better off if they would employ such a person on full time. They don't need to hire a trained bookkeeper either.

"Get any girl who is decently bright and buy for her a correspondence course on bookkeeping. Train her to keep your office neat and assist you in many simple duties. We will venture a guess that you will be able to devote more time to real problems of your work and your increased income will more than pay for your assistant."

Absolutely true! Not only could such a bright girl attend to the bookkeeping and collections, but, she could be trained to

give assistance in office treatments, to administer anesthetics, make urinary examinations, attend to the doctor's medicines, in other words make herself simply invaluable.

It is far better to be free, leave the forts and barricades of fear, to stand erect and face the future with a smile.—R. G. Ingersoll.

AMERICANS ALL

At a meeting recently held at Ann Arbor, the Calhoun County (Michigan) Medical Society, unanimously passed the following resolution:

"Membership to the Calhoun County Medical Society shall be permitted only to American citizens."

We commend this action to every other medical society in the United States. There never was a time when it was more important to insist upon unhyphenated Americanism. We have, we hope, eliminated German-American propaganda in this country. Now, let's get rid of Irish-American and all other propaganda tending to involve our country in the racial entanglements and the nationalistic ambitions of poor, distressed, war-worn Europe. Millions to reconstruct Europe and feed her starving children, but, not one penny to encourage further bitterness and future wars.

COMPARATIVE MORTALITY OF THE GREAT WAR AND THE WORLD EPIDEMIC OF INFLUENZA

Terrible as were the losses of life on the battlefields of the Great War, they are surpassed by those caused by the pandemic of influenza which, last year, swept around the world—if we may believe the statistical information gathered by J. Laumonier and published in a recent number of the *Gazette des Hôpitaux*.

According to the figures, now available, the war was directly responsible for the death of 7,000,000 men, of whom 1,350,000 died in France alone. In the eleven months of the influenza epidemic, that is, from May, 1918, to March, 1919, over 26,000,000 people in the entire world succumbed to this disease. In central and western Europe alone, there were 447,000 deaths in the last half year of 1918; in France, there were 300,000 deaths during the epidemic; in Italy, 165,000; in Spain, 800,000. In the United States, the loss was estimated at 2,000,000.

The disease was particularly fatal in southern climates; for instance, in Samoa, among 30,000 inhabitants there were 8,000 deaths. In Japan, there were over 20,000,000 cases, with 250,000 deaths; while in India it is estimated that there occurred 6,000,000 deaths.

According to these figures, while war is terrible, epidemics of disease are even more deadly. The point, however, that Laumonier fails to make, is, that war itself is the greatest disseminator of epidemic disease. It is highly probable that this great epidemic owes its origin to the Great War. Even now, we are in the midst of a second epidemic, fortunately mild, but, terrible enough; while in the Baltic provinces, Poland and western Russia, epidemics of typhus and cholera are claiming thousands of victims. It is said that, right now, in these countries there are over a million cases of these two deadly diseases.

INFLUENZA PREDICTION FULFILLED

In the issue of the London *Lancet* for November 8, 1919, there appeared a prediction, by Dr. John Brownlee, D. Sc., based on a careful study of past influenza epidemics, that a recurrence of the 1918 influenza epidemic would occur in January or February, 1920.

Doctor Brownlee found that influenza epidemics recurred at intervals of 33 weeks, providing the thirty-third week did not fall between June and December, in which case the recurrence would be expected at the end of 66 or 99 weeks, and, therefore, he regards the fall epidemic of 1918 as an exception to the rule. In the United States, we are now having a recurrence after 66 weeks.

It is now exactly 66 weeks since the mortality peak of the 1918 epidemic in Chicago. The same is true for New York City and Washington. In all three of these places, influenza now is epidemic.

The periodicity suggests that we may be dealing with infecting organisms which not only have the power to reproduce themselves in a virulent form continuously for a long period if susceptible persons are

exposed, but which also have the power of developing in cycles of 33 or 66 weeks.

The recurrence might be explained on the hypothesis that immunity has lasted 66 weeks, though this hypothesis does not explain the fact already noticed in some families that those attacked in 1918 are now immune, while those not attacked in 1918 are now contracting the disease. The more reasonable explanation seems to be, that the present epidemic is due to a definite cyclical regrowth of the infecting organisms from the seed of the former epidemic.

Definite cycles of development are common in the known vegetable and animal world; some plants flower annually, some biennially; the material organism may complete its cycle in two or more days; the locust requires in some cases 17 years.

Similarly, the organism responsible for our recent pandemic may complete its cycle in 33 weeks or perhaps 66 weeks. This recurrence of the epidemic after 66 weeks certainly strengthens the view that the epidemics of 1889, 1890, 1918, and 1920 all have a common etiology.

The pig is taught by sermons and epistles. To think the God of Swine has snout and bristles.—Hudibras.

NECESSITY OF A NEW VIEWPOINT IN CLINICAL MEDICINE

Some time ago, Dr. Francis M. Pottenger, of Monrovia, California, produced a new book entitled "Symptoms of Visceral Disease" and being a study of the vegetative nervous system in its relationship to clinical medicine. Owing to certain uncontrollable circumstances, it was not possible to devote the time and study to this volume, for the purpose of review, commensurate with its importance; and, therefore, the attractive task of reviewing the book was postponed until quite recently. We hope to present a detailed discussion of Doctor Pottenger's latest work in the next issue of CLINICAL MEDICINE. We mention the subject here, however, because we desire to reproduce some of Doctor Pottenger's remarks on the needs of clinical medicine and especially on its relation to laboratory investigations. Doctor Pottenger, first and foremost, is a clinician. He maintains, justly, that medicine is not a loosely combined collection of different specialties but that it is one great whole, the various aspects of which can only be appreciated fully with reference to general and special systematic conditions. More will be said of this on another occasion. The remarks that we desire to reproduce in this place are as follows:

"The one outstanding need of modern medicine is, accurate clinical observation and interpretation. This statement is not made to underrate or belittle the truly great observations that, heretofore, have been made, nor in a spirit of ingratitude toward those who have blazed the way. It is made, rather, in the spirit of an admission that clinical observation has lagged behind when compared with the various phases of laboratory investigation. In fact, clinical medicine has been in danger of becoming, not, the master, but the willing servant of the laboratory worker. Medical laboratories are operated for two purposes, to aid in the prevention of disease and to aid in the study and cure of those afflicted with disease.

"The transposition by which the laboratory has been placed above clinical observation, has been due to many influences. Medicine has developed unevenly. Laboratory medicine has been an inviting field and has succeeded in interesting many of the brightest minds among the best trained of the younger men who, by dint of hard work, have observed and correlated many important facts. The laboratory era, too, opened at a time when clinical medicine was losing some of its former prestige. The former reverence for the physician and the blind faith in his remedies were waning. Instead of seizing upon the new laboratory discoveries as being an aid to clinical observations, the clinician almost ceased to observe and made his opinions secondary to the laboratory findings; and "laboratory diagnosis" became an accepted fact in medicine, and was over and above the observations of those who saw and studied the patients.

"While laboratory workers deserve the greatest credit for the untiring energy which they have exerted and the invaluable contributions which they have made to medicine, through which it has been placed upon a scientific basis, yet we are now able to look further ahead; and as we do, we recognize the clinician, the one who sees

and studies the patient, as the one who must evaluate diagnostic data from all sources and give the final opinion. In order to be able to do this, he must not only be familiar with laboratory methods and be able to properly interpret such findings, but he must also cultivate the same accuracy of observation for the study of the patient as the laboratory worker has developed in the study of his subject. The clinician's subject, however, is the patient, with all his departures from normal function and all abnormal tissues, secretions, and excretions found by whatever method of examination."

BUTTERMILK A FOOD DRINK

A pleasant, refreshing beverage and a nourishing food combined in one product is found in buttermiilk. It contains practically all the food materials of whole milk with the exception of the fat, most of which is removed in the process of churning. Buttermilk contains about 3 percent of protein, nearly 5 percent of carbohydrates in the form of milk sugar, 0.7 percent of mineral constituents, and 0.5 percentage of fat. Thus, a quart of buttermilk furnishes slightly more than an ounce of protein, one of the chief body builders.

The increasing consumption of buttermilk testifies to its popularity as a beverage. People are beginning to realize that it is much better to drink a glass of milk or buttermiilk than it is to consume other drinks having little food value. Many physicians recommend buttermiilk in the treatment of certain intestinal disorders, and it is also gaining in favor in hospitals.

Prepared buttermilk usually is made from skim milk and has all the chemical properties of buttermilk. If it is churned, as is usually the case, it agrees in appearance and flavor with real buttermilk. In fact, often it is a better product, especially if clean, sweet buttermilk can be made in the city home, but, more uniform results can be obtained when it is made on a large scale, and, for that reason, it usually is better to purchase it from a reliable dealer.

Buttermilk Lemonade—A delicious variation may be made from ordinary buttermilk by the addition of lemon juice and sugar. "Buttermilk lemonade" usually requires the juice of three lemons to one quart of buttermilk. The quantity of lemon and sugar, however, should be varied to suit the taste of the individual. The beverage is delightful and is especially refreshing on a hot summer day.

Lacto—The Iowa Agricultural Experiment Station, in *Bulletin 118,* describes a number of ways in which sour milk or buttermilk may be converted into frozen delicacies. The following formula is adapted from the bulletin:

2 quarts buttermilk
2 pounds of sugar
2 eggs
1⅔ cups orange juice
½ cup lemon juice

Dissolve the sugar in the buttermilk and add the eggs, the yolks and white beaten separately. Stir and strain the mixture and add the fruit juices. Freeze in the usual way, and pack in ice and salt for an hour before serving.

Of course, buttermilk may be used in cookery in any recipe calling for sour milk.

Additional information concerning buttermilk may be found in *Department Bulletin* 319, entitled "Fermented Milks," which can be obtained upon application to the Superintendent of Documents, Government Printing Office, Washington, D. C., at the price of 5 cents.

A man may live long, and die at last in ignorance of many truths, which his mind was capable of knowing, and that with certainty.—Locke—"Human Understanding."

PHYSICAL EDUCATION IN SCHOOLS

"Bulletin No. 50," issued for the Government Bureau of Education, in 1917, treats of physical education in secondary schools. It can be secured by addressing the Department of the Interior, Bureau of Education, Washington, D. C. The report contained in this bulletin was drafted for the Commission on the Reorganization of Secondary Education, by its committee on physical education. As citizen as well as parents, physicians should be interested in the subject.

In the new civilization, one of the most important problems of the highschool, and the central problem of physical education, is, how to secure and conserve health. Doctor Harris, formerly United States Commissioner of Education, wrote as early as 1891: "Here is the special problem of our time for hygiene to meet—how to restore and conserve nervous energy." There

are three factors here: First, the one of food and its proper assimilation; second, the factor of sleep and rest; and, third, the factor of exercise, both muscular and mental.

The work of the schools calls primarily for the functional activity of the higher centers of the central nervous system. It fails to emphasize the principal positive hygienic factor in that it disregards the motor activities related to the lower nervous centers controlling circulation, respiration, nutrition and elimination. Besides, it neglects an important phase of education, in that it minimizes, to the vanishing point, those motor activities related to good carriage, motor presence, motor personality, and motor consciousness. The attainment of adequate motor control is impossible with the present equipment and time allotment.

The following health program is recommended:

1. A careful health examination which should include: a. Medical inspection. b. Mental examination. c. Physical examination.
2. A healthful environment in home and school.
3. Instruction in health problems.
4. Physical activity. a. Equipment, minimum requirement. b. Amount and kind, minimum requirement. c. Kind of exercise.
5. School credit.

The objects of medical inspection have been, the detection of infectious diseases, of physical defects in the pupils, and the improvement of the sanitary condition of the schoolroom. The medical inspector should cooperate with the physical instructor in the correction of physical defects and with the regular teacher or the trained psychologist in the diagnosis and treatment of mental defects.

The mental examination should seek to ascertain the mental health of the pupil, and his nervous and mental constitution. The health of the individual depends in large measure upon a normal central nervous system, and upon his attitude of mind toward his work. The time of entering the junior highschool (seventh grade) is the most critical time in adolescence. At this time, the constitution is particularly liable to nervous difficulties, as most neuroses either develop at this time or lay their insidious hold then upon the individual to develop later.

In terms of the physical-education grades, pupils who are fond of physical activities, who excell in them and are leaders in games and sports, as a rule possess good central nervous systems.

On the other hand, the pupil who has little physical skill and no interest in games usually lacks organic vigor. The extreme type of these pupils is found in the recluse and the bookworm. It is especially in this class of children that an unstable nervous system may be expected. If their education is confined to a purely intellectual education, it will be at the expense particularly of the organic centers of the nervous system, related to circulation, respiration and nutrition.

The physical examination calls for a study of the growth and physique of the pupil, and a close correlation of the conditions found, with the physical activity prescribed. The examination should include such vital problems as eyesight, hearing, growth in height and weight, bodily strength, lung capacity, cardiac efficiency. All these factors should be correlated with the adolescent maturity of the pupils, and their scholarship.

A healthful environment should include a home with adequate food for healthy growth, together with sleeping and living rooms which follow at least the minimum regulations of size, light, and ventilation. It should include a schoolroom properly ventilated, with temperature never above 70 degrees and preferably between 63° and 65° F., provided a normal relative humidity of approximately 50 percent and adequate air movements are maintained. The schoolroom should be supplied with proper natural and artificial lighting systems and the walls should be so colored as to reduce eye strain.

The types of exercise used should be those that call into vigorous play the large fundamental groups of the big muscles; these exercises are related to the development of vigor, endurance and power. This instruction should be supplemented by exercises of skill, grace, and alertness. Special attention should be given to securing good postural habits, while standing, sitting, and exercising.

Teachers and coaches representing the highest ideals in morals and personal char-

acter should be selected. Preferably, the coaching should be done by regular teachers and, if possible, by the director of physical education. With the adolescent group, the basal virtues are caught through the inspiring personality of teachers, during their direction of activities, more often than they are taught through definite moral instruction in the class room. The moral standards and personal leadership of the teachers of physical education will be a large factor in determining whether these boys are to be merely healthy animals or future moral leaders in the community.

Chance is a word void of sense; nothing can exist without a cause.—Voltaire—"A Philosophical Dictionary."

THE PRODUCTION OF BRIGHT'S DISEASE BY FEEDING HIGH PROTEIN DIETS

The chief business of the kidneys is, to rid the organism of the end-products of protein metabolism. This task is accomplished, to a considerable extent, by active secretion on the part of certain portions of the tubular epithelium. These cells will not only remove normal waste, but, also will remove from the blood stream substances that are foreign to it, even though they may be severely injured by the poisons passing through them. Thus, investigators have shown that, when the kidney eliminates such substances as mercury, or the salts of uranium and chromium, a high-grade tubular nephritis may be produced; and that the acute tubular injury may be followed by a chronic nephritis.

These investigations offer a useful suggestion for those numerous instances of renal disease, more especially nephritis (commonly miscalled Bright's disease) in which the clinician is unable to find a cause. The fact that injury is sustained by the renal cells, by the elimination of large amounts of mercury, for instance, has been taken to suggest that the same may be true in the case of nitrogenous bodies that are habitually secreted by the renal cells. Writing in the *Archives of Internal Medicine* (Oct. 1919), Dr. L. H. Newburgh, of Ann Arbor, Michigan, declares that the kidneys can secrete a certain amount of nitrogenous matter for an indefinite period without suffering harm, but that they will be injured if the quantity of some or all of the nitrogenous substances secreted is increased and kept at the higher level for some time.

For the purpose of elucidating this problem, rabbits were fed diets of abnormally high protein contents. Three groups of rabbits were studied. Group A included those animals whose nitrogen metabolism was increased by means of egg-white; Group B consisted of rabbits that lived on a high-protein diet because of the addition of casein; while Group C was made up of the rabbits that were fed solely with soy beans, that is to say, with a vegetable protein.

The results of this experiment showed that the excessive ingestion of protein may lead to irritation and inflammation of the renal passages, thus giving rise to nephritis. The results as outlined by Doctor Newburgh are as follows:

1. Renal injury was very quickly and constantly noted in rabbits that ate several egg-whites daily.

2. Prolonged egg-white feeding caused acute and subacute nephritis.

3. When the nitrogenous metabolism was increased by means of casein, rabbits suffered no demonstrable renal injury from eating 16 Gm. of casein daily; but, when the daily intake of casein was 30 Gm., and the nitrogen metabolism was about three times more than normal, a well marked deleterious effect upon the kidney was produced.

4. Rabbits that lived on soy beans, for months, regularly acquired chronic nephritis and frequently died of it. The nitrogen metabolism from this diet was about twice the normal.

5. The renal lesion produced by feeding high-protein diets was not caused by the passage of too much urea through the kidneys.

These data suggest that the kidney injury is related to those digestion products of protein which vary both quantitively and qualitively with the type of protein eaten.

Leading Articles

The Treatment of Habitual Vomiting and of Congenital Pyloric Stenosis

By Dr. A. B. MARFAN, Paris, France

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Surgeon to Various Paris Hospitals

EDITORIAL COMMENT.—Habitual vomiting in small infants is a very serious condition and one that, often, taxes the utmost resources of even the experienced physician. Professor Marfan has presented us with a very valuable contribution on the treatment of this serious malady. His advice is certain of proving of great service to those who study it carefully and adopt the recommendations of the author.

WHETHER the physician be confronted with habitual vomiting or with pyloric stenosis, the treatment, at first, is the same. Most frequently, the differential diagnosis between these two affections can be established only after a certain period of time. Once the existence of an organic stenosis of the pylorus has become certain or very probable, it is necessary to continue the same treatment until the indications for surgical intervention have become clear. I shall say, later on, upon what factors these indications are grounded.

On undertaking the treatment of an infant afflicted with vomiting, it is necessary to institute an inquiry into the causes which could produce the affection. If there exists a suspicion of syphilis, specific treatment should be prescribed. There need be no hesitation in giving mercury by mouth, particularly in the form of the lactate in solution of 1 to 1,000 (*Nourrisson*, Mar. 1918, p. 86); the stomach of vomiting babies bears this remedy very well. It is necessary to search out the causes that could produce a dyspeptic condition, such as, excessive feeding or the ingestion of milk with injurious properties. Naturally, the necessary advice will be given to suppress those causes that have been discovered. But, if the infant continues to vomit frequently, after the regimen has been regulated, it is necessary to seek for means capable of causing the cessation of the vomiting or of diminishing it in frequency. These means are found in certain modifications of the alimentary regimen in association with the employment of internal and external treatment.

Alimentary Regimen

It is difficult to outline a rigorous dietetic program that is applicable in all cases of habitual vomiting. It is necessary to vary the prescription in accordance with the character and the phases of the affection and, sometimes, one has to feel one's way. However, there are some rules that are generally applicable, especially at the beginning of treatment.

1. The first is that, by all means possible, the vomiting baby must be nourished in order to prevent its falling into a condition of inanition. It must be fed despite the vomiting. No doubt, sometimes it is useful to subject it to a brief period of water feeding, but, observation has shown that the complete and prolonged withholding of food not only is useless but may aggravate the affection. Above all, inanition must be prevented. Indeed, it is not so essential to suppress the vomiting, as it is, to nourish the patient. This principle being established, let us seek out what are the foodstuffs that will agree with the vomiting baby, then, how the selected nutriment is to be administered.

2. Without contradiction, woman's milk is the best food for an infant afflicted with habitual vomiting. If it is already being nursed, it is well to leave the baby with

its nurse and not to change the latter, unless it is definitely shown that the infant is particularly intolerant of the milk of this nurse. Such a proof can but rarely be afforded. If the vomiting baby is being fed artifically, a wetnurse should be supplied, if this is at all possible, and the patient should be nursed even if he continues the vomiting. If it is not possible to put the baby to the breast, one should attempt to feed it, at least for a time, with ass's milk, but, this is a very expensive article of food and can not always be procured.[1] In this case, it is necessary to resort to preparations of skimmed cow's milk. Of all the constituents of cow's milk, it is the fat that is tolerated least well by vomiting babies. This is retained longest in the stomach and, there, gives rise to the formation of volatile fatty acids that are irritants. To the preparations of skim milk, sugar is added which is tolerated perfectly well by vomiting infants, while its addition to the skim milk increases its nutritive value. Therefore, lacking woman's milk, or ass's milk, one employs skimmed cow's milk to which sugarwater (10 percent) has been added, at first half and half, then in the proportion of one to three, later in that of one to four. Condensed, skimmed and sugared milk[2] is at first given in weak dilutions, 1 dessertspoonful to 50 Grams of water. Of a dilution of powdered skim milk, to which 5 percent of sugar has been added, 2 or 3 coffeespoonfuls of the milk powder are dissolved in 50 Grams of water. One may try also buttermilk or kefir since these foodstuffs contain but little fat. Kefir has been advocated by Mr. Pehu as the nutriment of choice for vomiting babies; but, these products fail quite frequently; by reason of their acidity, without a doubt. Moreover, we suggest that they be not employed except with the addition of lime-water; at first a mixture of one-third of buttermilk, or kefir, one-third of lime water and one-third of water being given. As to the socalled "humanized" milk, or milk modified in a definite way, that possesses hardly any advantages over ordinary cow's milk.

If the infant is more than three months old, one may add, to the foodstuff mentioned, paps of milk farina or paps to which maltose has been added. In children of over five or six months, one will try farina pap that is a little thicker, this being prepared at first with farina gruel and water, or with vegetable broth, and, later on, having added increasing quantities of milk. It seems that this food, which is not of very solid consistency but semiliquid is tolerated better by the irritated stomach.

3. As to the mode of administering the selected food, it is necessary to differentiate between two main classes of cases. In the common form of habitual vomiting, if there is no constipation, the infant may be made to take an amount of food almost equivalent to that which it would take if it were well, giving the same number of meals at the same intervals. However, when vomiting is accompanied by a somewhat intense diarrhea, it is well to commence treatment by a period of water feeding continued for six to twelve hours. Then, small feedings are given at four-hour intervals. Later on, one can go back fairly rapidly to the normal mode of feeding which is maintained despite the persistence of vomiting.

In the serious form of insistent vomiting and obstinate constipation, the mode of feeding that seems to be most useful is, to give less copious feedings and these more frequently than under a normal regimen. By proceeding in this manner, the stomach is called upon for only little work. It is excited as little as possible and, yet, one succeeds in nourishing the patient. At first, the quantities are minimal and the intervals between them very brief. Gradually, however, quantity of feedings and intervals between meals must both be increased.

A Concrete Example

Let us take an example to show how these rules must be applied. Suppose an infant of two months, afflicted with habitual vomiting that has reached a phase of insistent vomiting with constipation, the greater part of the ingested food being rejected after each feeding, and notable emaciation having occurred. Treatment will be commenced by subjecting this infant to a brief period of water diet, for not more than twelve hours. During this time, one will give occasionally, say, at half-

[1] In the editor's opinion, goat's milk probably would take the place of ass's milk very satisfactorily.

[2] Variot, Lavialle et Rousselot. A study of the antiemetic properties of sweetened condensed milk. (*Soc. de Péd.*, 11 févr. et 11 mars, 1913; *Congres internat. de méd.* de Londres, aout, 1913)—Nobécourt, *Arch. de méd. des enfants*, mai, 1914; p. 321.

hourly intervals, 1 or 2 coffeespoonfuls of boiled water, which is cold, even chilled.

Thus, the stomach is put at complete rest and saved from all excitation. However, experience shows that it is useless to prolong this diet more than half a day. On resuming feeding, the patient will be given the selected nourishment with the spoon. (Woman's milk, ass's milk, or preparations of skim milk diluted and sweetened). Thus, it is possible to determine the amount taken by the patient. Moreover, one avoids suction which seems to overexcite the vomiting centers and to favor aerophagy. This nourishment is given cold or even chilled.

During the first six hours, 1 coffeespoonful of food will be administered about every fifteen minutes. If the first attempt is tolerated fairly well, if the infant has retained a part of these small meals, then 2 and later 3 coffeespoonfuls are given every half hour during the six hours succeeding. In the third quarter of the day, one gives, every hour, 4 and their 5 coffeespoonfuls (20 and 25 Grams); then, during the night, the infant is permitted to rest for six or seven hours. On the second or third day, ten meals are given in the twenty-four hours, each one containing 25 Grams (5 coffeespoonfuls) of the selected food, the intervals being one and a half hours during the day, with one feeding during the night. In proportion as toleration is established, the quantities are increased so that, on the fourth and fifth day of the treatment, ten meals are given, each containing 30 Grams. During the following days, there are nine meals of 40 Grams each. Later, eight meals are given in the twenty-four hours. These are spaced two hours apart and will contain 50 Grams of liquid each. Thus, the quantities of food are increased gradually as also the intervals between feedings, so as to arrive at the normal regimen. The progress will be more or less rapid, accordingly as the stomach retains the ingested milk more or less well. Once a certain degree of toleration is established, the food no longer is given with the spoon; the baby is again put to the breast or fed with the bottle. On applying these rules, one often succeeds, not, in suppressing completely all vomiting but, in suppressing its frequency as well as the quantity of the rejected food. Consequently, the weight of the baby will again increase. Then it is possible to arrange for a nearly normal alimentary regimen, although the baby must be supervised carefully.

If vomiting persists, in spite of this mode of feeding, the attempt must be made to establish a tolerance for food by giving it with the medicine dropper. The cold liquid, preferably human milk or ass's milk, is placed drop by drop into the mouth of the infant, every three or four minutes. With this method, which only a mother or a devoted attendant may operate successfully, it is possible, sometimes, to establish toleration and to relieve the effects of inanition.

For the general carrying out of the treatment, the example just outlined may afford sufficient guidance. Still, it is necessary to know how to modify the details of the treatment according to the given case.

Modifications of the Regimen

If the baby is more than three months old, it often is found well to substitute, for three or four milk feedings, pap, or farina in milk, commencing with 1 coffeespoonful in 50 Grams of water.

If the patient is more than five months old, the employment of ordinary farina gruel, slightly thickened, often gives good results. At first, this is prepared with water. 1 coffeespoonful of rice farina and 1 lump of sugar are boiled for twenty minutes in 75 Grams of water or of vegetable bouillon. This gruel may be substituted for three or four milk feedings. It may even be given exclusively. In the latter case, 2 or 3 coffeespoonfuls are given every hour, say, from twelve to fourteen times in the twenty-four hours. If the infant tolerates this new food, at least in part, a new gruel is made containing 3 coffeespoonfuls of rice farina, 1 lump of sugar, 25 Grams of milk and 75 Grams of water. This is given in like manner as the preceding. Unless a certain degree of tolerance is established, several gruel feedings are replaced by milk (human milk or cow's milk which is diluted and sweetened as has been outlined in the foregoing) and this is given, cold or chilled, with a spoon in doses of 2 or 3 coffeespoonfuls. Gradually, the number of milk feedings is increased as well as the intervals between feedings being lengthened and, with each feeding, the quantity of milk is augmented. In this manner, a normal mode of feeding will be approached. If the child is

more than five months old, it is necessary to give the seven meals in the twenty-four hours for a sufficiently long time, five of which are with milk and two with gruel. It is possible to make certain modifications in this regimen; for instance, at first, one may alternate with some thickened gruels made with vegetable bouillon or with vegetable bouillon alone.

Sometimes, finally, success followed, in a little older infants the employment of the dry feedings proposed by Mr. Gallois. Fresh cheese is prepared by causing skim milk to coagulate by means of rennet. Four or five times a day, 10 Grams triturated in 20 or 30 Grams of milk are given. After improvement has commenced, the quantity of the milk is increased at each feeding. Gradually, a normal regimen is reached.

When, despite all measures employed, the vomiting persists and the symptoms of inanition make their appearance, it has been proposed to feed the patient through the rectum. But, the insufficient absorption in this organ and the intolerance of the intestine prevent generally the resort to this method. Nevertheless, several physicians believe that it is possible, sometimes, to succeed by introducing human milk into the rectum.[1]

I have not hesitated to prepare a list of considerable variations of foodstuffs that might be employed and to propose various methods for their administration. If the stomach of the vomiting infant is capricious, very often it is necessary to feel one's way in order to find the food and the method of feeding that may be tolerated.

Hygienic Prescriptions

The general hygiene of the vomiting infant must not be neglected. It is not to be forgotten that the patient is very nervous. He must be placed in quiet surroundings, protected from noise and from bright light. Also, he should live in the open air. If the vomiting is prolonged, it is necessary, if at all possible, to send the baby into the country, into the mountains or to the seashore. This change of environment often is favorable. As we have observed, infants received at the "Crèche" on account of habitual vomiting, sometimes stop vomiting almost completely soon after admission. True, this improvement often is of but short duration.

We have seen that excessive aerophagy may complicate and aggravate the malady. At the beginning, when the food is administered by means of the spoon, it is not necessary to trouble about this but, when the attempt is made again to give the milk by means of the bottle, one must take steps to diminish the swallowing of air and to prevent its retention. When a feeding is given with the bottle, this must be held almost vertically and not horizontally, in order to make sure that in the neck of the bottle and in the nipple a layer of air is not superimposed upon the milk. After the feeding, the child will be held upright for several minutes in order to facilitate eructation and favor the expulsion of a portion of the swallowed air. One should not shake the baby brusquely, especially when it is laid down again in its cradle.

Medicinal Treatment

Certain external remedies and some medicines must be employed at the same time as the regimen of feeding. Some of them are potent aids in the treatment.

In the common form of the malady, the treatment will be limited to the employment of enemas with very hot water, and the administration of certain antidyspeptic medicines, among which the subnitrate of bismuth occupies first rank.

Enemas with very hot water (104° to 155° F.) possess an antiemetic action. From the beginning, the treatment should be administered twice a day, each time 120 Grams of water being introduced under gentle pressure into the intestine of infants less than three months old. Between three and six months, the amount is 150 Grams, and, in infants over six months, it is 200 Grams. Later on, one enema is given daily and, eventually, one every other day.

In the common form, the subnitrate of bismuth is the most useful remedy, and is to be given before meals when it seems to have a direct effect upon the gastric mucous membrane and to quiet its irritability.

℞ Subnitrate of bismuth.....2 Grams
Sweetened mucilage
Syrup .....of each, 45 mils.
Shake.

Sig: 1 coffeespoonful, five to ten minutes before feeding, six times daily; or, then,

[1] Frédet et Guillemot, Pyloric hypertrophic stenosis in Infants. (*Congres de Gyn., d'Obst. et de Péd.* Toulouse, 1910, p. 42).

four times a day, ¼ Gram of subnitrate of bismuth given with the bottle.

Mr. Variot has vaunted the antiemetic action of citrate of sodium which was advocated by Wright and Poynton as favoring the digestion of cow's milk. This action is very inconstant but, if one suspects that the hyperacidity contributes to maintain the vomiting, one may give, one hour after feeding, an alkaline substance (bicarbonate of sodium, citrate of sodium, lime water).

℞ Distilled water.....300 Grams
Citrate of sodium..... 6 Grams

Sig: 1 coffeespoonful to each bottle of 50 to 60 Grams' capacity, 2 to each bottle of 100 to 120 Grams' capacity. 1 soupspoonful to each bottle of 150 Grams' capacity. If the baby is at the breast, it should be given, according to age, 1 or 2 coffeespoonfuls at each feeding.

It has also been advised to employ gastric ferments such as rennet. One finds this in the pharmacies under various names. It is an extract of the mucosa of the calf-stomach and is procured in the form of a white powder. It is rich in coagulating ferments, but also contains pepsin. A saltspoonful of this is added to 100 Grams of milk, either pure or mixed with water, and heated to about 37° C. The milk is coagulated but, on brisk agitation, the clot is broken up in very fine floccules that pass through the openings of the nipple. If the infant is at the breast, a coffeespoonful of the milk of the wet nurse is mixed with a saltspoonful of the rennet-powder. This is allowed to stand for two or three minutes and then the baby is made to take it, after which it is put to the breast. During the first three months of life, rennet-powder sometimes is badly tolerated. (Lemaire Jules, Société de Pédiatrie de Paris).

Pepsin and papaine also have been recommended.

℞ Pepsin in scales in each powder .....0.15 Grams

Dispense 20 powders.

The contents of one powder is suspended in a little milk (human or cow's milk) being given before meals, four or five times daily.

Papaine is a ferment of vegetable origin, the action of which is analogous to that of animal pepsin. One coffeespoonful of syrup of papaine during feeding, four or five times daily. (*Le Nourrisson*, Vol. 7, No. 4.)

In the intense form with prolonged periods of spasm, hot enemas are employed in accordance with the rules outlined in the preceding. Moreover, compresses of clothes wrung out of very warm water (130° F.) are applied to the epigastrium and abdomen, and renewed every hour for five or six hours. If these applications are not successful, one may attempt, twice daily and for five minutes, a sort of gentle massage of the abdomen, the hand being anointed with oil of camphorated camomile. Twice daily, the baby is placed in a warm bath (100° F.) lasting for ten minutes.

In this serious form, the antidyspeptic remedies must be replaced by antispasmodics, especially tincture of belladonna. Opiates have not given me good results. I frequently add bromine to belladonna, which reinforces its action, and also bicarbonate of sodium which acts as an alkali; for, in this form, hyperacidity is frequent. The carbonic acid that is liberated, moreover, has a certain anesthetizing actoin.

℞

Tincture of belladonna..... 15 drops
Bromide of sodium..... 1 Gram
Bicarbonate of sodium..... 1.50 Grams
Distilled water ..... 60 Grams
Simple syrup ..... 30 mils

One coffeespoonful contains ¾ drops of tincture of belladonna, 0.05 Grams of bromide of sodium, and 0.075 Grams of bicarbonate of sodium.

The dose for babies up to three months old is, 4 coffeespoonfuls daily.

From three to six months, 6 coffeespoonsfuls per day.

From six to twelve months, 4 dessertspoonfuls. Each dose is given from five to ten minutes before feeding.

If the inanition arising from the continued rejection of food results in a very marked anutrition, it is necessary for the first three or four days of the treatment to give daily hypodermic injections of from 10 to 20 mils of seawater, or of saline solution (8 per 1000). When there is danger of collapse, camphorated ethereal oil (1 in 20) is injected twice daily, each time in doses of 1/3 mil, and stimulating rubs are administered. In case of subnormal temperature, the patient must be warmed as in cases of debility.

It is quite infrequent that the regimen and the medicinal treatment just outlined, if employed methodically, do not bring about an amelioration of the condition. After several days, the attacks of vomiting become less frequent, only a portion of the feeding is rejected, an almost sufficient alimentation becomes possible, the weight no longer goes down and, eventually, it increases gradually, although not quite con-

stantly. In this manner, recovery takes place progressively in a large number of the cases.

Gastric Lavage

If, after several days, the employment of these procedures does not give satisfactory results, if the affection persists, one may attempt to improve it by lavage of the stomach. It was Marchand who, in 1851, was the first to introduce a tube into the stomach of debilitated infants in order to nourish them.

In 1880, Epstein, of Prague, practiced the first stomach lavage in nurslings, and was followed in this procedure by a great many physicians.[1] At first, lavage of the stomach was applied indifferently to the treatment of all gastrointestinal affections in infants. It was looked upon as one of the indispensable remedial agents. Frequently, it was believed that it sufficed by itself to bring about recovery. After this period of enthusiasm and abuse, there followed a reaction. It was found that gastric lavage often failed, that it possessed disadvantages and was not without danger. The attempt was then made to determine exactly the indications and these were drawn more and more sharply so that, at the present time, certain physicians even have denied any advantage whatever to the method.

We believe that, sometimes, it may serve to ameliorate the disease of habitual vomiting. We shall, therefore, describe in this place the technic and shall also discuss the exact indications as well as the contraindications.

Gastric lavage in the infant is quite a simple operation. The apparatus that is employed consists of a catheter of red rubber, 16 inches long, the caliber of which varies according to age, from No. 10 to No. 30 of the Charrière scale. As this catheter is not long enough to permit extensive motions during siphoning, one might add to it, by means of a glass tube, a longer rubber tube. At the free end of this latter, a glass funnel of about two hundred mils' capacity is attached. It is well to attach to the rubber tube a regulator like the one suggested by Frémont for gastric lavage in the adult. That is to say, a rubber bulb above which there is attached a forceps for compression. This permits the aspiration of the gastric contents. It is of use also to clear out the tube when a clot of milk occludes it, which takes place very often.

The liquid serving for lavage is, warm boiled water, about 85° F., to which bicarbonate of sodium in the proportion of 1 percent has been added.

The Technic of Gastric Lavage

For the operation, the infant may be left lying on the back, but, in order to avoid all danger of the liquid flowing into the respiratory passages, some authors prefer to have the body upright, the baby held sitting upon the knees of a nurse, its arms wrapped up and the body as well as the neck protected by an oil cloth. A basin is placed upon a tray. The tube, being well softened in alkaline water or lubricated with a little glycerine, is introduced into the mouth as far as the base of the neck. The baby then will make some motions of deglutition and it only is necessary to push the tube gently for it to enter the esophagus and ultimately the stomach. During this time of the operation, it is well to hold the jaws separated with a finger or with a small cork so that the baby can not chew. The tube is pushed down until it has passed a sufficient length corresponding to that from the forehead to the epigastrium.

The tube being in the stomach, one may pour into the funnel, held about 6 inches above the baby, a quantity of liquid, that is to say, from 50 to 100 mils, according to the age of the patient. Before the liquid has disappeared from the funnel, the latter is lowered below the body of the child and over the basin which is held in readiness. The liquid returns from the stomach in the basin by siphoning, carrying with it clots of milk and whitish or yellowish shreds of mucous membrane. If the siphonage has not been fully successful, it is repeated by pouring a small amount of liquid into the funnel. This operation is repeated two or three times until the liquid returns almost clear. In order to wash out the stomach well, it is of advantage to produce the formation of intragastric waves by raising and lowering the funnel before removing the stomach contents.

During the operation, certain slight incidents may take place. Attempts at vomiting may displace the tube which then must be replaced. Moreover, these efforts at vomiting cause the flow of the gastric fluid between the tube and the esophagus

[1] Olmières. Indications for gastric lavage in infants. Thèse de Paris, 1898.

and from there into the pharynx. If the patient still is vigorous, there occurs a reaction. He coughs and expels the liquid by the mouth, but, if he is athrepsic, or cachetic, being capable of only feeble resistance, the fluid may enter the respiratory passages. This is one reason why gastric lavage is discountenanced in athrepsic subjects.

It may happen that the esophagus contracts and that the spasm renders the entering of the tube very difficult. It is then necessary to select a somewhat more rigid tube which is pushed down slowly and with intervals of rest. Sometimes, the sound is stopped up and it is cleared out by pouring a little water into the funnel and raising this slightly higher; also, the bulb may be employed. If this does not succeed, the tube is withdrawn, it is cleaned out, and the operation is repeated. One need not fear to push the tube into the larnyx while proceeding as has been suggested.

Indications for Gastric Lavage

The gastric lavage is indicated only in cases of habitual vomiting that have resisted all regimen and medicinal treatment as outlined in the proceeding. It should never be employed systematically from the beginning of the treatment; because one may often succeed without it, and for the reason that its action is quite inconstant. If it has been decided to employ it, the following procedure is suggested. On the first two days, lavage is practiced twice a day. Then, it is withheld if no amelioration takes place. If the effects have been manifestly favorable, one may continue to administer a lavage every two or three days for one week longer. One should not administer too frequent washings, nor should these be continued for a long time, for, ultimately, they irritate the stomach and the nervous system.

Lavage should be carried out as long as possible after the preceding meal—two or three hours later. Before giving another feeding, one should wait at least a quarter of an hour. In favorable cases, after two or three applications of lavage, one will observe that some of the feedings are retained entirely or in part.

Action of Lavage

The action of the lavage undoubtedly is complex. First, it acts mechanically in some way: It evacuates and cleans out the stomach, it relieves it of alimentary residues and of secretions which, in case of stasis, ferment and give rise to the formation of irritating products. But, probably, it acts also by bringing about vital modifications. It may be supposed that lavage diminishes the spasmodic state, that it makes the movements of the gastropyloric muscles more regular, and that it stimulates all digestive glands.

Gastric lavage should not be practiced in athrepsic patients. Aside from the fact that it causes shock which their feeble condition renders dangerous, the gastric fluids may flow back into the respiratory passages as has already been said, and cause bronchopneumonia. I warn equally against lavage of the stomach in patients afflicted with serious diarrhea, especially the choleriform diarrhea. In these cases, the operation may give rise to convulsions terminating in death.

Surgical Treatment of Hypertrophic Stenosis of the Pylorus

If the employment of the means outlined in the foregoing has failed, it will be necessary to consider the possible existence of a congenital hypertrophic stenosis of the pylorus. This diagnosis brings forward the question of surgical intervention. Certain peculiarities will give the diagnosis a considerable degree of probability, especially if they coexist: The beginning of vomiting in the very first weeks or days of life, their constancy and persistency, the absence of bile in the vomited material, the recognition of visible peristaltic movements across the abdominal wall and of a pyloric tumor. These are reliable signs, but they may be absent and are, moreover, recognized but slowly. Then, there is severe constipation and rapid emaciation.

A decision may be looked for by radioscopic examination after the ingestion of broth containing a salt of bismuth or of barium. Ordinarily, this shows signs of stasis: The stomach more or less dilated, violent peristaltic contraction, failure or decided retardation of the passage of the bismuth through the pylorus. If a notable portion of the bismuth passes into the intestine, it may be hoped that there does not exist a serious organic stenosis and one may postpone surgical intervention.[1]

Surgical intervention must not, however, be postponed too long. The operative mor-

[1] Gronet, Sédillot et Veau, Congenital Hypertrophy of the Pylorus, treated by operation, in a two-months old infant. (*Soc. de Péd.*, 1913, p. 162.)

tality of 40 percent is due, in great part, to the fact that, when one does operate, the patients are so run down that they can not stand the shock of operation. Three weeks must suffice for the attempts at medical treatment and for establishing a diagnosis. If at the end of this time the vomiting persists and if the loss of weight continues, it is necessary to operate.[1]

The choice of the most useful operation has been the object of much discussion.[2] But the surgeons agree in rejecting pylorectomy as a dangerous and useless operation; jejunostomy as a serious and merely palliative operation, being followed by continued illness; divulsion of the pylorus after the method of Loreta as exposing to peritoneal infection. The choice of operation will have to be between gastric mucous pyloroplasty and gastroenterostomy.

The first, the operation of Rammstedt, enjoys the favor of most surgeons. The incision is made along the axis of the intestine into the hypertrophied pyloric ring without opening the mucous membrane. This latter is unfolded through the incision into the pylorus, is left without suture and the abdominal wall is closed. In certain cases, Frédet suggests even to make two incisions. However, sometimes the tumor is so hard that the operator has the impression as if a pyloroplastic operation were insufficient. In that case, resort will be had to gastroenterostomy.

For other surgeons, gastroenterostomy is not the operation of necessity but the operation of choice. According to them, it is applicable to all cases. Carried out in a proper manner, it permits the immediate reestablishment of feeding. Later, if the permeability of the pylorous is reestablished, the gastroenteric opening may cease to function. It has been objected to gastroenterostomy that the operation is more serious and more difficult than extramucous pyloroplasty. Frédet does not think so, and, after having practiced the latter, he has come to give the preference to gastroenterostomy. To him, this operation does not seem to be more serious than pyloroplasty. Moreover, the researches of Talbot have shown that, in the small patients who have a gastrointestinal opening, digestion and assimilation of foods and of nitrogenous substances are carried out in a normal manner.

Although, at present, pyloroplasty seems to recruit more partisans than gastroenterostomy, statistics hardly permit a definite conclusion.[1]

In all cases when intervention has been practiced, the patients must be subjected to the alimentary regimen and the treatment for habitual vomiting. If there are some that after operation tolerate feeding well, in whom vomiting and constipation disappear and who rapidly regain weight and strength, there are others that, as soon as one commences to feed them again, vomit again repeatedly and, their weight remains oscillating for a certain time before assuming a regular increase. Still others show diarrhea and it is necessary to train their intestine, that has been out of practice for a long time, to accept and digest food.

Pyloroduodenal Catheterization

Quite recently, A. F. Hess, of New York, has suggested resort to pyloroduodenal catheterization, not only for the sake of diagnosis but, also, for treating the disease of habitual vomiting and congenital stenosis of the pylorus.[2] The employment of this method has hitherto been greatly restricted. We refer to it merely for the sake of completeness.

A rubber tube, 4½ millimeters in diameter, more or less, according to the case, and 50 or 60 centimeters in length, is used for this operation. This tube is marked at distances of 20, 25, 30, 35 and 40 centimeters. After having smeared it with borated glycerine, it is introduced into the stomach.

On arriving at the first mark, one will feel a resistance which Hess attributes to the reflex closing of the pylorus. After

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[1]Hess, The Treatment of Pyloric Stenosis in Infants. (*Assoc. Internat de Pédiatrie*, 1912, p. 385; *Le Nourrisson*, mars 1914, p. 109.)

[2]Frédet and Guillemot, Pyloric Hypertrophic Stenosis in Infants. (*Congr. d. Gynéc., d'Obst, et de Pédi.* Toulouse, 1910, p. 42.

[1]Frédet, Surgical Treatment of Hypertrophic Stenosis of the Pylorus in Infants. (*Soc. Méd. des Hosp.*, 27 Dec., 1912.)

[2]Hess (A.-F.) Duodenal Catheterization and Feeding in Infants. (*Interstate Med. Jour.*, XXI, 1914, p. 953.)

H. K. Hirschfeld, Congenital Hypertrophic Stenosis of the Pylorus and the operation of Rammstedt. (*La Pediatria*, Mai, 1916).—W. Downes, Operative Treatment of Pyloric Obstruction in Infants. (*Medical Record*, April, 1916, p. 629).—Monnier, Surgical Treatment of Pyloric Stenosis in Infants. (*Revue Méd. de la Suisse Romande, Nov.-Déc.*, 1916, Nos. 11 and 12).

Vulliet, *Ibid.*, Nov.-Déc., 1916, Nos. 11 et 12.

Grulee et D. Lewis, Diagnosis and Treatment of Congenital Pyloric Stenosis (*Arch. de Méd. des Enfants*, Févr. et Mars., 1917).

Rachford, *Arch. of Pediatrics*, Nov., 1917.—Strauss, *Journal A. M. A.*, 7 Sept., 1918.

this, the tube must be pushed on only with much circumspection since forced catheterization entails the risk of causing the instrument to roll up in the stomach. However, if one knows how to wait, and holding the tube in position fairly firmly, this acts by its own elasticity and it does not take long before one feels that the catheter has cleared the pylorus. Now the instrument is pushed slowly down to the mark 30 or 35. It is possible to make sure that the tube is actually in the duodenum, either by examining the liquid by aspiration, which is more or less viscid and slightly acid or alkaline, or by radioscopic examination. It is now possible to nourish the baby into the duodenum. The alimentary fluid is allowed to flow into a funnel fastened to the tube, taking care to do this with gentle pressure so that the liquid enters the intestine but slowly and without returning along the tube into the stomach.

If a No. 15 catheter can clear the pylorus, it is probable that there does not exist organic stenosis. In this case, one may try duodenal alimentation. The duodenal meal must not be frequent and must be small in quantity, being introduced slowly, and it must be quite warm. If this attempt fails, if duodenal catheterization shows that the stenosis is quite small, it remains only to try surgical intervention.

Le Nourrisson, Juillet, 1916, p. 237. Velasco Blanco. A case of Pyloric Spasm treated by the Method of Hess.
(*Archivos Latino-Americanos de Pediatria*, Janv.-Fevr., 1916, p. 43.
(*Le Nourrisson*, Janv., 1917, p. 51).

Chemical Warfare

By O. A. DONNELLY, M. D., Chicago, Illinois, and
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EDITORIAL COMMENT.—The deleterious effects of the poisonous gases, made notorious through the newest customs of modern warfare, are even worse than our imagination had pictured, after reading newspaper accounts concerning them. The article presented in the following depicts some of the injury done, accidentally, by the mustard gas of evil reputation. Fortunately, there is available an effective treatment.

THE use of synthetic gases, as introduced by Germany in her last war, so shocked the civilized world that it recovered its equipoise but slowly and then made a mighty effort to produce a like means of attack. This was a slow procedure, as it meant the creating of an entirely new bureau in the British War Department.

The tenacity with which our good English friends hold on to an idea, once they get it, is responsible for a ready solution of the problem of the socalled "mustard gas". This gas was discovered, originally, by an English chemist, as a byproduct, and was quickly discarded when found to be unfit for any known purpose; but, it was promptly stored by the Germans in their archives of destructive warfare and developed for use in the manner with which we are so well acquainted. Having had the benefit of years of careful study, they perfected its production and employment; to a point that left room for but few accidents in its manufacture. Not so with us before our entrance into the world's holocaust. The feverish assembling of chemical experts, the building of plants to manufacture and the general inexperience led to many accidents that were far worse than those which befell our boys who were actually confronting the gas on the battle fields of Europe.

No attempt will be made to tell the various ways in which these workers in the Chemical Warfare Bureau could, or were, injured; this article will be confined rather to the results of exposure to various gases.

Non-lethal Gases

Much has been written regarding gases that were not particularly lethal, but, of this class I will mention only two, namely, chloropicrin, and sneeze- and tear gas. Chloropicrin did no particular damage, unless there was an extremely long exposure with inhalation. The same may be said of sneeze- and tear gas; the end results of exposure being, edema of the mucous and serous surfaces; the eyes swelling until closed, in bad cases, with conjunctivitis and inflammation and swelling of the pharynx, larynx and postnasal cavities,

coupled with more or less edema. In the minor cases, this cleared up in ten days or two weeks, the majority requiring a considerably longer time. There were but few fatalities due to these, but much pain and inconvenience.

Deadly Gases

This brings us to the two principal and more deadly gases, namely, phosgene and mustard gas.

Of phosgene, there is but little to say except that it is the most dangerous of all gases, in that, being odorless and invisible,

Fig. 1. Case No. 1.

one is not aware of its proximity until it has done irretrievable damage, when inhaled in any amount.

Also, it has a predilection for the serous surfaces and, in small amounts, produces an acute bronchitis with conjunctivitis. When large amounts are inhaled, there is but little aid that can be rendered, the patient usually dying in twenty-four to thirty-six hours from hydrops of the lungs.

Upon the blood, the reaction was one of coagulation throughout the whole vascular system. We have many times endeavored to produce bleeding by opening an artery for the purpose of saline instillation. No hemorrhage resulted and the blood expressed was blue and cohesive.

Mustard Gas

The "mustard" synthetic gas may safely be pronounced the most vicious item ever produced for use against human beings. The finished product is a white liquid, semioleaginous in appearance and "feel", with a great affinity for water. This latter feature established it firmly as a most excellent article to employ owing to the constant rain-fall in the localities in which it was most to be used. Nothing dissipates it when once it is scattered except the direct rays of the sun or the use of bleaching powders such as chloride of lime; and, as the prevalence of rainy weather in Northern France would lead us to believe that the writer of "Sunny France" could not have been at home during the wet season, and as it was impossible to carry chloride of lime in sufficient quantity, mustard gas promptly assumed the position of the Kaiser's master weapon.

Fortunately, a large number of the German gas shells were faulty and did not explode; moreover, since the bulk of their supply had been used before we entered the war and these devilish gases could not again be manufactured on a large scale, undoubtedly many of our wonderful boys were saved from an untimely end. Of course, the Germans followed the practice of sending over one now and then, to keep us on the alert, as it were.

In addition to its predilection for moisture, there presented another most dangerous element. Except for the odor (and this was present to a greater or less extent in the plants at all times) one was not aware of exposure until some twenty-four or more hours later. The first noticeable symptom was, usually, an erythema of the skin, accompanied by itching and followed by inflammation which rapidly passed through its cycle of swelling and bleb for-

Fig. 2. Case No. 1.

mation. The blebs were enormous in size and, in those that are depicted in the accompanying cuts, rose from three to four inches from the base line. They are loculated, the contents organized, and they did not collapse upon puncturing, but lost their free serum content by a slow oozing. The blebs persisted for three to five days after which the entire mass sloughed off leaving the denuded surface of a first-, second-, or third-degree burn, according to the intensity of exposure. Up to the time of sloughing, there was no pain, but, from

then on, until granulation was complete, each dressing caused excruciating pain.

The treatment, which gave most satisfaction, while I was at this plant, consisted in applying parresine to the entire reddened surface until sloughing occurred, then to wash off the part with a one-

Fig. 3. Case No. 2.

percent solution of chlorazene, allow it to dry and then cover with parresine. Dressings were changed daily.

Observation had proven that, prior to the routine use of chlorazene, there had been considerable trouble with exogenous growth that required curetting; which was a slow and extremely painful procedure. After instituting the cleansing of the part with chlorazene, however, we had no further trouble. We also demonstrated successfully that a bad exogenous growth

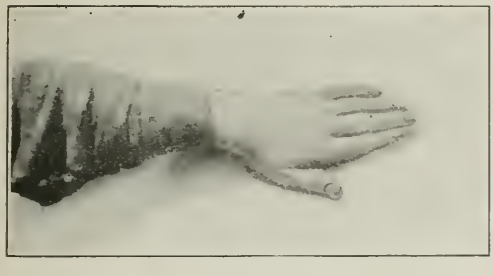

Fig. 4. Case No. 2.

would completely clear up when a continuous moist dressing of chlorazene was applied.

The eyes and lungs were the seat of most trouble. By the persistent use of atropine, permanent adhesions were prevented from forming in the iris, and the application of yellow oxide of mercury to the lids cleared up most cases in a reasonable time. The lungs, unfortunately, could not be handled so well and it meant *la mort* for one who had inhaled a large amount, death being induced by edema of the lung.

In most cases of exposure, the genitals were subject to bad burns that were more difficult of treatment, especially those on scrotum and rectum. There seems to be a devitalization of the tissues after reconstruction, rendering them very susceptible to all outside influences, developing, as it were, a chronic indolent ulcer that proved very obstinate.

Photographs showing the results in a number of cases are found in the text of this article.

Case 1 (Figs. 1 and 2) is that of a young private who wore a glove that had been

Fig. 5. Case No. 3.

laid down by another and had not been sterilized. A burn of the third degree resulted. The hand, after treatment as outlined, is shown in Fig. 2.

Case 2 (Figs. 3 and 4) is that of a private who had his hand completely immersed in the fluid and who came in

Fig. 6. Case No. 3.

the hospital for treatment, neglecting to have emergency treatment at the plant. This also was a burn of the third degree. (Fig. 3). Its appearance upon recovery under the same treatment is shown in Fig. 4.

Case 3 (Figs. 5 and 6) is that of a private who wore a complete outfit—gloves, overalls, rubber boots—that had not been sterilized, resulting in a burn of both arms from elbow to finger tips, and of the lower body from the umbilicus to the toes of

both legs. The legs from the crotch down suffered a burn of the third degree, while that on the waist, arms and hands was of the second degree. This man lost probably thirty percent of the entire cuticle of the body, yet, he made excellent recovery. The cut (Fig. 5) depicts one leg just after sloughing had taken place. The other was in practically the same condition. The shadow on the cut (Fig. 6), after healing, is due to some error of the plate and is not a raw or ulcerated surface as it might suggest.

We were handicapped in the treatment by being compelled to apply parresine with a swab, but the writer wishes to say that Doctor Abbott very promptly shipped (gratis) a vaporizer to the plant upon hearing of this condition. However, as one of the writers was enroute to England before it arrived, he did not have the pleasure of using the apparatus himself.

Successful Treatment of Typhoid Fever

By M. E. BOVEE, M. D., Port Huron, Michigan

EDITORIAL COMMENT.—The treatment of typhoid fever by means of intestinal antiseptics?—To some physicians, the possibilities of this mode of treatment still are sub judice. To us, they have been firmly established for many years. Doctor Bovee's account of his experiences is highly instructive and should be heeded by those having to deal with typhoid fever. This preventable disease still is altogether too frequent in certain localities. Let us take to heart the lesson for its prompt and efficient treatment.

IT has been stated that there is no specific treatment for typhoid fever unless the vaccines may be called specifics. It has also been asserted that intestinal antiseptics are of but little, if any value; and

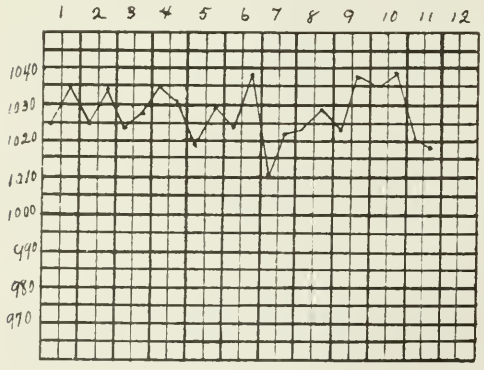

Chart 1. Mr. E. S.

these statements have been made by some eminent men in the profession. The question arises, have these intestinal antiseptics been given a thorough tryout, and has close observation been made of their effects? Hundreds of physicians throughout the country are using them successfully and will swear by them.

It is my sincere belief that typhoid fever can be held in check and, often, cut short by the proper treatment. This belief is based on the observation of a series of cases which responded beautifully to treatment. It is my personal conviction that I have aborted some cases in seven days, but, that being too short a time to make a definite diagnosis, they will not be considered here. All the cases reported here were cases in which there was no question of the diagnosis, and some gave a positive Widal reaction.

I well remember one of my first cases of this dread disease. The patient was a very devout church goer and believed

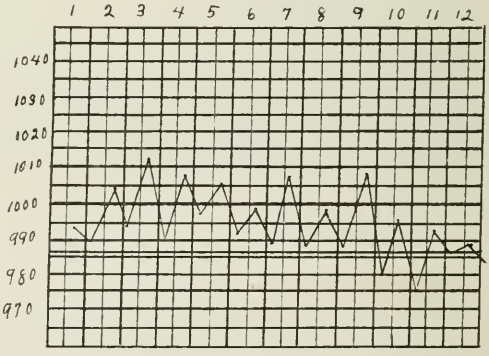

Chart 2. Mrs. G. S.

in the efficacy of divine healing. I put him on the old standby treatment, quinine and salol, with cold bathing to keep down the temperature. After the disease had run for from seven to ten days, he told me one morning that I was a good fellow

and he liked me very much, but that he had decided to take the Almighty as his physician and that I need not call again. I very humbly told him that, while I did not doubt in the least the ability of the Divine One, yet I thought him a very foolish man not to use the usual prescribed treatment in that disease. He was delirious at times, were perfectly rational and, when asked how they felt, invariably replied, "pretty good".

The nurse was told, in each case, that, if the temperature went above 102.5 degrees, a cool bath (98.6 degrees), was to be given; but, few such baths were needed. Mornings, the patient was given a warm

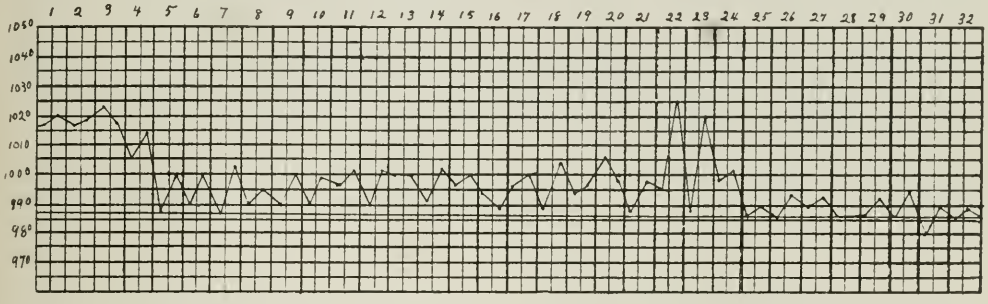

Chart 3. Mr. G. C.

temperature being quite high (Mr. E. S., Chart 1), vomiting, abdomen distended, absolutely no appetite; but, in looking back at the case I cannot but think that he was a wise man, for, the nurse could do the bathing, and the treatment otherwise was practically useless. By letting me go he saved a large bill that was sure to accrue whatever the outcome.

Results of Intestinal Antiseptics

Each patient that received the intestinal antiseptic treatment began to feel better saline bath and alcohol rub, with especial attention to the back. In the line of diet, each one received liquids and nothing harder than a soft-poached egg was allowed. The mouth was scrubbed out with liquor alkalinus antisepticus, or an equivalent, once or twice a day. When the diarrhea had been controlled, as it was in each case after the administration of intestinal antiseptics for a few days, castor oil was used as often as necessary to keep the bowels in good condition.

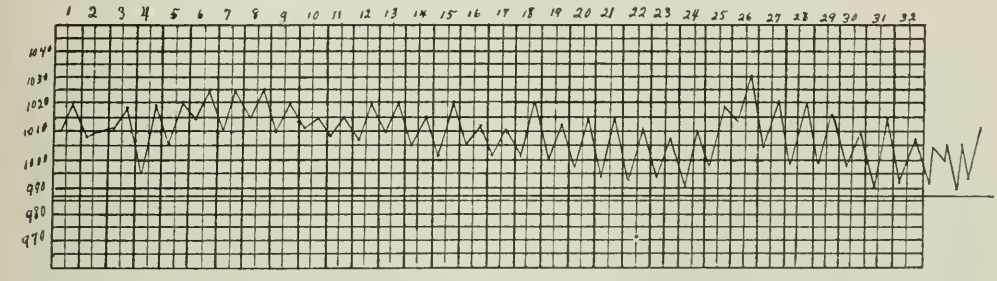

Chart 4. Mrs. D.

from the start. Within four or five days from the beginning of the treatment, the temperature declined and seldom afterward went above 102 degrees. The appetite came back to a certain degree, the abdomen, usually distended, became flat, with very little tympanites; the diarrhea was controlled, and in only one case was there any delirium. All the other patients

The intestinal antiseptics used were, copper sulphocarbolate, gr. 1/12 every three hours and triple sulphocarbolates, from 5 to 20 grs. every three hours, according to the dose necessary to control the diarrhea. Emetine hydrochlorde, ½ to 1 grain was administered daily by the hypodermic route. Vaccines were used in gradually ascending doses. Ipecac was ad-

ministered internally in the form of emetoid. When acetozone was used, a solution of 15 grains to the pint was given, and 3 teaspoonfuls every three hours was the dose.

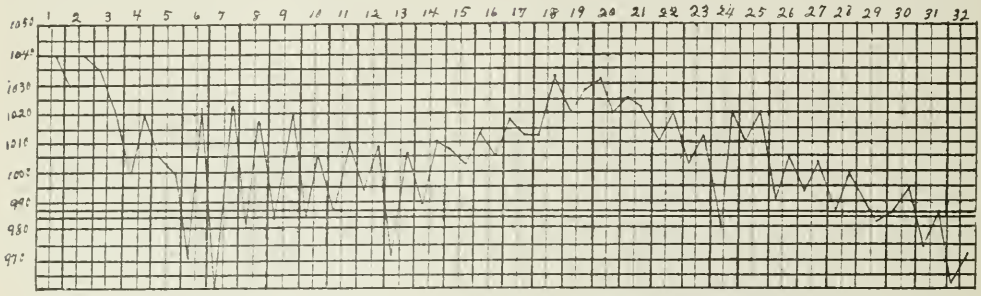

Chart 5. Miss M. B. S.

Mrs. G. S. (Chart 2) received the same treatment, and felt fine all through the course of the fever. Her temperature persisted only 14 days.

Mr. G. C. (Chart 3), received triple sulphocarbolates and copper sulphocarbolate. His temperature began to decline on the fourth day and seldom went above

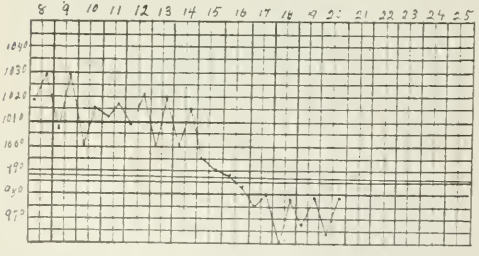

Chart 7. Miss E. M.

100 degrees except during the recrudescence. He felt well all the time, in fact used to lie in bed and play on the fiddle by the hour. He was given a milk diet and began to make such a hog of himself that we had to cut him down in quantity.

Mrs. D. (Chart 4), received the sulphocarbolates together with typhoid vaccine. Her temperature remained good throughout the course of the disease, but the fever continued so long that acetozone was given to see if it would not cut it short. The temperature began to decline at once.

Miss M. B. S. (Chart 5), received the

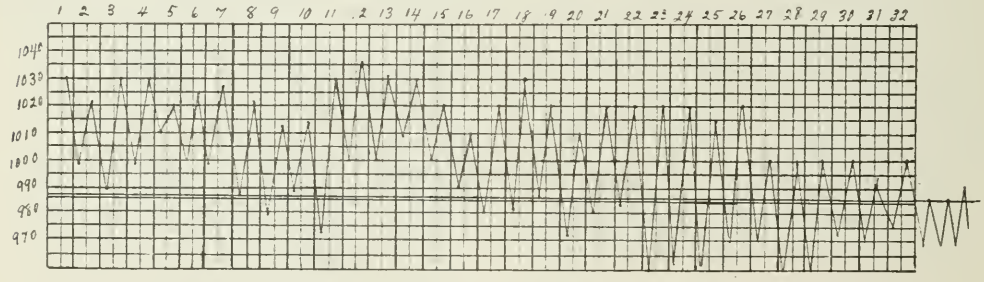

Chart 6. Mr. C. C.

sulphocarbolate treatment with typhoid vaccine and emetine hypodermically. Note the decline in temperature as soon as treatment was instituted. This girl was the granddaughter of the foregoing patient.

Mr. C. C. (Chart 6), received the sulphocarbolates, with vaccine and emetine on alternate days. He had a particularly severe infection and I came in late on the case. This was the only patient that had any delirium and this only at times. Even at that, the treatment held the temperature down very well and the deep remissions were due to vaccines or emetine. The vaccines and emetine were purposely withheld and then given again in order to demonstrate definitely that the deep remissions were due to them.

Mr. C. D. (Chart lost), was given the same treatment as the others, except for

the emetine which was given by mouth as well as hypodermically. His temperature declined and went to normal in 15 days. At the beginning of the disease, it was in the neighborhood of 104 degrees. He was on his feet again in three weeks.

Miss E. M. (Chart 7), was given the sulphocarbolates, with emetine hypodermically and by mouth. It will be noted in the chart that this treatment had reduced the temperature in a few days about one degree. Then, chlorazene was added to the other treatment. I came to the conclusion that the bowel must be about as aseptic as possible, due to the action of the sulphocarbolates, for, there was no further diminution of symptoms after the ingestion of so powerful an antiseptic as chlorazene.

It seemed to me that, if the systemic action of the bacillus could be inhibited, the intestines being in good condition, the disease could be cut short further. Accordingly, I decided to try sodium cacodylate, as a blood antiseptic (if you please), it being more active than emetine. The patient was given 2½ grs. on the 15th day, 4 grs. the next day and 5 grs. on the third day. As shown in the chart, the temperature dropped to below normal immediately, and the patient began to complain that we were starving her. She made an uneventful recovery. Whether the sodium cacodylate would have done this alone and without the intestinal antiseptics, I do not know. However, there is no question in my mind that the cacodylate put the finishing touch to the remaining bacilli.

There is a chance for more investigation concerning the use of this drug in typhoid fever. In this age of antityphoid vaccination and better sanitation, the cases of this disease apparently are dwindling down and chances for observation are more limited. However, if the readers of this journal would interest themselves in this drug, and each one report his results, it would not be long before we would have a barrelful of more or less accurate data.

The old saying "An ounce of prevention is worth a pound of cure" is true of this disease. It is to be hoped that antityphoid vaccination will be used more extensively in the future than it has been in the past. The benefits of this procedure have been proved conclusively.

Appendectomy Under Hyoscine-Morphine-Cactoid and Procaine Anesthesia

By CHARLES FOX ANDERSON, Lexington, Kentucky

RECENTLY, while in the city of Berea, Kentucky, widely known because of its college with two thousand and more students, where I am a consulting physician to the Robinson Hospital and lecturer at its training school for nurses, I had the pleasure of witnessing a most interesting and highly successful case of appendicitis, operated under hyoscine-morphine-cactoid and procaine anesthesia. The operation was performed by Dr. R. H. Cowley, of the Berea College faculty.

Mr. Roberts, aged seventy-nine, was taken ill early in the morning with intense abdominal pain and marked distention. The pain was general, but worse in the appendicial region. The blood count showed 1,000 white blood cells with 75 percent of the polymorphous cells. The patient was taken immediately to the hospital where copious enemas brought away considerable hard fecal matter and quantities of gas. His relief was marked but the tenderness still was quite severe. The temperature was 100°. In the afternoon, the blood count was 11,500 with 75 percent of the polymorphous. The patient now was quite comfortable. The next morning, his temperature was 97°, white cells 13,500, with 86 percent polymorphous. The tenderness was now especially marked over the appendicial region. An operation was agreed upon but, owing to the patient's extreme age, it was thought unwise to give a general anesthetic.

The Operation

The patient was given, by hypodermic injection, ¾ of a quarter-grain tablet of hyoscine-morphine-cactoid. Half an hour later, the skin and subcutaneous tissue

were infiltrated with ½-percent procaine solution. No ether or chloroform or suggestion were employed throughout the operation. When the incision was made, the patient was sleeping comfortably. The infiltration with procaine then was extended into the muscle and down to the peritoneum. This was incised without disturbing the patient. The surgeon's finger was introduced and passed down to the region of the appendix. When this was touched, the patient gave evidence of some sensation which, he said afterward, was more like a pulling than a sharp pain. A small amount of the procaine solution was poured into the wound. The appendix was difficult to remove, it being held at the middle portion by its mesentery close to the back. In pulling it out to a point where the mesentery could be grasped by an artery forceps, the patient showed the only evidence of real pain during the operation and later on said that, though he was semiawake at the time, the pain was not at all severe. He said after the operation that it was all like a dream.

The appendix was found to be gangrenous and perforated at one point. There was free fluid in the peritoneal cavity and a small amount of pus close to the appendix. The appendix was removed in the ordinary way, the stump invaginated with a pursestring suture, a soft rubber tube fastened to its mesentery with catgut and the wound closed in layers as usual. The patient slept quietly for three hours and, when he awoke, was free from nausea. He was given water to drink and talked and joked with his nurse. He made an uneventful recovery.

This little city can proudly boast of three of the best surgeons, not only in Kentucky, but in the south. They are, the Robinson Brothers and Dr. Cowley. The Robinson Hospital had the lowest mortality record in Kentucky last year. These two brothers are widely known as "The Mayos of Kentucky". They are very young men and so remarkably successful in their work that the day is close at hand when they will be known, and deservedly so, as "The Mayos of the South".

EVERY failure is a step to success; every detection of what is false directs us toward what is true; every trial exhausts some tempting form of error. Not only so, but scarcely any attempt is entirely a failure; scarcely any theory, the result of steady thought, is altogether false; no tempting form of error is without some latent charm derived from truth.—Whewell.

The Cost of Medical and of Hospital Service

By EDDY S. HASWELL, M. D., Albany, N. Y.
Attending Physician to the Homeopathic Hospital

EDITORIAL COMMENT.—How many physicians there are who have figured, in exact manner, the expense of "setting up in business?" We venture to say that there are mighty few. Yet, in order to be successful, in a business way, the cost of instalment, so to speak, must be known. It is invested capital and should bring an adequate return. Doctor Haswell's calculations contain a lesson that it were well to heed. Read and, then, "Let's Talk it Over."

VIRTUALLY none of the laity and very few members of the medical profession have any conception as to the cost of the medical service rendered daily to the community by physicians.

Discounting the cost of primary and high school education, the necessary prerequisites to any profession, let us first consider the cost of the medical education itself. The following figures were estimated by the writer for the editor of *The Knickerbocker Press,* of Albany, N. Y.:

Matriculation,	$5.00
Premedical college course, two years' tuition, at $90	180.00
Medical tuition, four years, at $160	640.00
Incidental college fees	60.00
Textbooks	200.00
Personal scientific apparatus	50.00
Microscope (optional)	100.00
Board, room laundry, carfare, six years, at $10 a week (minimum)	3,120.00
Clothing, six years, at $150	900.00
Incidentals, six years, at $2 a week	624.00
One year hospital interne, clothing and incidentals	300.00
	$ 6,179.00
Seven years lost income at $800	5,600.00
	$11,779.00

There are about 14 weeks of vacation per year in which a student might gain employment at $15.00 per week and of which he might possibly net $5.00, or $420 for the six vacations, thereby reducing the cost to $11,359, but, the interest on $11,359. for seven years, at 6 percent is $4,770.78, bringing the total up to $16,129.78.

This estimation does not include traveling expenses or recreation.

The average practicing physician, not including the big surgeon, has certain expenses that must be met in order to be ready to sell service and which, estimated at, not, the maximum but, the *minimum* rates, are approximately as follows:

Rent	$480.00
Auto upkeep (garage rent, oil, gas, tires, repairs)	633.00
Medical books and magazines	75.00
Office supplies	250.00
Insurance premiums	300.00
Family of 3 or 4—	
Clothes	250.00
Food	700.00
Coal	75.00
Gas and electricity	60.00
Laundry and cleaning	150.00
Ice	25.00
Medical Society dues	10.00
Telephone	39.00
	$3,047.00

Thus, the minimum yearly cost for absolute necessities is such that it costs at least $3047.00 for the physician to maintain himself and his family in a position wherein he is ready to sell service.

Therefore, to equip a man to attend his first patient, we find the cost of medical education to be $16,129.78 pluss the cost of office equipment $500.00, equalling $16,629.78; but, to make his yearly expenses on the principal invested, the physician must secure a dividend of at least 18¼ percent, or $3047. It takes a pretty good stock to pay that dividend, and especially when it is only for maintenance and nothing for luxuries, recreation, nor the education of children.

Looked upon as invested capital, medical skill and knowledge constitute a fixed and specialized form of capital that cannot be converted into any other form paying bigger dividends, neither can they be bought or sold as the market rises or falls. The capital is not negotiable and it is not transferable.

It is plainly evident that, from an economic viewpoint, the practice of medicine

is a business with its invested capital, dividends, cost of production, cost of maintenance, fixed and variable expense.

What would be the effect of price fixing, as intended by the proponents of the iniquitous plan of compulsory health insurance?

If the compulsory health insurance law were to become operative in Albany, today, the following would be the probable result:

The Income of the Panel Physician

The apparently actively practicing medical men of Albany number about 180, but, about 60 are practicing some specialty, such as, nose, throat, eye and ear; surgery or some surgical specialty; nervous and mental diseases; obstetrics, urology, skin diseases, et cetera, while about another 15, by reason of age and infirmity, would probably be unable to do the work of panel physicians. Thus, there would be a possible 105 physicians eligible as panel physicians; though, from present indications, and the general temper of the profession, it is doubtful if 25 of them would serve under the law.

Albany's population is about 110,000. Assuming that there are one-fourth that number of families, or 27,500, to be divided among 100 physicians, each physician would have, theoretically, 275 families, while only about 75 percent, or 205, families would be admissible to benefits.

205 families, at an average of 4 to the family, means 820 people. The average person is sick 10 days per annum, giving 8,200 calls per year, or 2 per day.

Now, the usual rate of payment to physicians has been $2.00 per capita per year per individual and the same per family. 205 families at $2.00 per annum is $410.00. $410.00 for 8200 calls, or $ .05, that is to say, 5 cents a call.

Even the full quota of 500 families, or 2000 people, with 20,000 calls per annum, at the $2.00-per-family rate, would be $1000 per annum, or ten cents a call; and, if the physician had 1,000 single people at $2.00 per annum, $2000, he would get 20 cents a call.

In Albany, with 205 families at 22 calls a day, at 20 minutes for a call and 10 minutes for transportation between calls, a ten-hour working day would bring in the magnificent sum of $1.10.

With a full quota of 500 families, or 20,000 calls per annum, the doctor would make an average of 54 calls a day.

Would the quality of service suffer?

Panel System Not Needed

It never can be charged against physicians, as a class, that the poor and needy have suffered for lack of attention because of medical parsimoniousness. As a profession, physicians are more than willing to extend gratuitous service and, certainly, in the matter of bills, they more than temper the wind to the shorn lamb by the great flexibility of the fee schedule, proportioning it as they do very frequently to the patient's income. Would any business man have a sliding scale of prices for his wares under the same circumstances? And, if he did, would the public consider it equitable or would they believe it to be a class distinction?

What About the Cost of Hospital Service?

So much for the individual relation of physicians to populace, but, what about our hospital service to communities?

During the recent campaign of the Homeopathic Hospital, the writer contributed the following articles to *The Knickerbocker Press,* that very kindly used them as editorials.

Hospitals

(*Knickerbocker Press*, Oct. 10, 1919)

"There is a popular, but, erroneous idea that hospitals are self-sustaining. They cannot be unless they are very heavily endowed or unless they charge such rates as would make it impossible for anybody but the wealthy to make use of their facilities.

"It requires the equivalent of the full time of one healthy person to give adequate care to one average patient. Therefore, a hospital must have as many employes as it has patients or beds. If you do not think so, you do not know the facts.

"This means that, in a hospital of 100 beds, there are needed, including the superintendent, office force, bookkeepers, stenographers, telephone operators, internes, superintendent of nurses, supervisors, pupil nurses, domestic help, porters, elevator operators, orderlies, a chef and his assistants, waitresses, laundry help, engineers and other miscellaneous workers, about 100 persons who must be fed and paid, besides all that is required for the bed, board, medicine and treatment of the patients.

"Considering the heavy increases in the cost of foodstuffs and in the prevailing

rate of wages, to say nothing of the higher price level of medicine and supplies, this situation imposes a severe burden upon the management of every hospital. If it were not a fact that hospital service is literally indispensable to the people, it might be a question if it was worth while to continue to try to carry such a burden.

"Let us look into the situation of the hospitals in Albany. In the public wards, which are those with the cheapest rates, there are two classes of patients, those who pay their own bills and those whose bills are paid by the city. One hospital in Albany estimates that it costs $2.49 a day to care for a patient in the public ward. Since those who pay their own bills pay two dollars a day, the hospital loses forty-nine cents a day for each such patient. For those whose bills are paid by the city, the rate is $11.50 a week, or $1.64 a day. In other words, the hospital's loss on each bed occupied by a paying patient in a public ward is $178.85 a year, and on each bed occupied by a city patient, the loss is $309.20 a year.

"If one of either of these classes attempted to get the same service at home, he would require two graduate nurses at $30 a week and keep, besides buying extras or special equipment and paying the physician's bills. Even those who pay the higher rates of $15 and $20 a week or more find the hospitals much less expensive than home treatment and infinitely superior in efficiency, comfort and safety. Modern medicine and surgery, with their resultant reduction of mortality, would be impossible without modern hospital care.

"This is something to think about. This week, the Homeopathic hospital is trying to raise a fund which it sorely needs. It is a fund to save human life. We must have hospitals, but, if we are to have them, we shall have to support them."

Surgery and the Hospitals

(*Knickerbocker Press,* Oct. 11, 1919)

"The practice of surgery has reached a higher point of excellence and surety in the United States than elsewhere. Not even all the battle experience which European surgeons have had in the great war enabled them to surpass the skill of American surgeons. There have been individual surgeons abroad who have ranked with the highest anywhere, but the average of American skill is superior to the general average, and the constantly decreasing American deathrate is in some part attributable to this skill.

"But, American surgeons would be helpless without the modern hospital. Their advances have been made possible only by modern American hospital methods and system. Think what is purchased for the ten-dollar operating fee. This fee provides the use of all the dressings, bandages, gauze, adhesive, sutures, ligatures, gowns, masks, and rubber gloves which are required, with their necessary preparation and sterilization; also, solutions, apparatus, appliances, sterilizers, instruments and electrical equipment to the value of thousands of dollars. Furthermore, there are from one to four operating-room nurses assisting and in attendance during operations, and the operating surgeon has one or two trained internes and, always, another surgeon to aid him.

"It would be a big task to set up an operating room outfit in a private home. It would cost five or ten times more, besides being much less efficient, and there would be grave danger that the air in the house might contain germs which, having access to the exposed tissues, would produce serious if not fatal complications. The ten-dollar fee purchases safety, efficiency and service, and, without the facilities which it provides, the ordinary successes of surgery would be unavailable to any but the rich.

"This is the sort of service that the hospitals of Albany are supplying, at rates that, by no means, cover their expenses. . . . There is no profit in the business of conducting a hospital, except such as comes from the performance of a noble task; and that is a profit in which all people should be glad to share. Hospitals are necessary, but, if we are to have them, we shall have to support them.

Hospitals, and Nurses

(*Knickerbocker Press,* Oct. 13, 1919)

"Without hospitals there could be no trained nurses. And, without trained nurses, life would be—well, if still worth living, it would at least be much more difficult to retain. The trained nurse is no luxury. Without her skill and patience, her cheerful calmness, her fortitude and her devoted care, illness and injuries would be tenfold more distressing and the practice of modern medicine and surgery

would be all but impossible. It is through the trained nurses that the hospital establishes its most direct contact with most persons, a contact that proves the hospital's case wherever there are doubters.

"The trained nurse comes from the training schools that are maintained in connection with the hospitals. In these schools, there is carried on a two- to three-years' course in the essentials and fundamentals of the various medical subjects, a course that is in many respects superior to the medical-college course of a quarter-century ago; and the pupils learn, through arduous actual practice, the needs of the sick, and how to care for them, how to meet emergencies, how to obey orders, how to see and hear; yet, keep silent; how to be brave and gentle, kindly and sympathetic, yet, strong.

"What would our men in the army and navy have done if there had been no skilled nurses? What would the population at home have done last winter during the epidemic of influenza? These were instances of gigantic need, but, every day, in city and country, in homes and hospitals, there are countless cases of suffering relieved, even of life preserved, by these trained women. They need no argument on their own behalf. They are a necessity, and they deserve the honor in which they are held.

"But, if we are to have trained nurses, we must have training schools. If we are to have training schools, we must have hospitals. And, if we are to have hospitals, we shall have to support them. . . . No hospital makes money: no hospital can even pay its way from current income. If ever a nurse has helped you, when you were ill and in pain and helpless, match that good deed now with one of your own and give while you may."

If, what has been written, aids in giving a clearer comprehension and understanding of the economic phase of medical service, then indeed my time has not been wasted; and, if the quoting of the editorials from the *Knickerbocker Press* gives hints and suggestions that prove valuable to hospitals in their quest for funds to aid the indigent sick so that more suffering may be relieved, then indeed, shall I feel that I have been well repaid for my efforts in this regard.

ALBEIT failure in any cause produces a correspondent misery in the soul, yet it is, in a sense, the highway to success, inasmuch as every discovery of what is false leads us to seek earnestly after what is true, and every fresh experience points out some form of error which we shall afterward carefully eschew.—Keats.

The Institute for Medical Research

By ALCINOUS B. JAMISON, M. D., New York City

EDITORIAL COMMENT.—Doctor Jamison, it is well known, has persistently and insistently raised his able voice against the dangerous and pernicious habit of constipation which, according to him, commences in early infancy, even then producing serious symptoms of proctocolitis. The picture that the author paints, in the following article is not a pretty one; but, it carries its earnest lesson—a lesson that may well be heeded by the conscientious physician.

A SHORT time ago, I received a bulletin from a medical institution in this city, announcing that they desired to have special cases referred to them for medical research. The promotors of this institution have adopted a very catchy and attractive name that, at once, fills the imagination with great expectations as to the future welfare of the human race.

But, sooner or later, fancy must cease her flight, while good judgment will take a closer and more accurate view of the proposed pioneer work. It is very laudable, on the part of medical men, to desire to know more and more about the human organism in order to become better able, thereby, to fulfil their duty to mankind.

However, as a matter of fact, I assert that the medical profession itself is responsible for all the ills that afflict man, as the layman has no proper means or source of information and guidance at his command, by which he might limit bodily diseases.

If accurate means of enlightenment were to be had by the layman, but, which he failed to heed, then the doctors would be absolved from any responsibility.

That Pernicious Body Chemistry

It is very evident that Nature did not intend the entity called man, to exist very long since it supplied him with a chemical apparatus to prepare poisons and with a mind without any heed about the hygienic care of it; hence his short and troubled fermentative existence. Nature also has provided that, in infancy and childhood, in the teens and even later in life, ignorance should preside over the functions of the body and mind.

Ignorance has long handicapped man in many ways, as the following dialogue will make plain:

"Whither goest thou?" said the angel.

"I know not."

"And whence hast thou come?"

"I know not."

"But who art thou?"

"I know not."

"Then thou are Man. See that thou turnest not back; but, pass on to the place whence thou hast come."

As long as the medical man and the layman cannot answer the above questions, one need not expect great success in the healing art.

The purpose of the practice of medicine is, not, to "jolly" man along with his many ills and acquired wampum until the shroud hides his body from view. It should educate him to take the best care of his body at all times, from the fact that it is an armor and instrument of an incarnate being, acquiring knowledge for still greater creative efforts in the future.

The Wages of Ignorance and Negligence

Physical and mental troubles must folsearch Institute" were to devote much or negligence. Of all things in life that require the best and most untiring care, the most important is a chemical vat, yclept the gastrointestinal reservoir. Each new supply of food and all the waste material should pass out of all the organs leaving them clean for further supplies of food and waste material, which, in turn, must leave all the organs in a hygienic or normal state for the next portion of the wine of life, or rather the elixir of life—the result of cleanliness from os to anus.

If the members of "The Medical Research Institute" were to devote much or all of their time to the study of what constitutes a continuous gastrointestinal canal and to bodily cleanliness from birth to ripe old age, what a blessing would be conferred upon a chemically poisoned race of beings.

If I could send to the Institute a case of lung, heart or kidney disease, or one of rheumatic fever, as they request, where the digestive apparatus and body has been in a

most excellent hygienic condition from birth up to the time the organs became affected, I would expect a report of much significance. Unfortunately I have no cases of this type to send them, as they do not exist.

There are other maladies with which I am very familiar, and have been for the past forty years, in which every organ of the body is in a very unhealthy state, with, frequently, some one organ incurably diseased. Medical research work in these cases would be a waste of time and money —even a postmortem examination. It requires no prophet to tell the past and future of such apparent conditions.

Medical research should mean, getting at the fundamental basis, or cause, of diseases, with directness and efficiency and in the shortest possible period of time.

Hygienic Rules Ignored

The normal intake of food is essential and the normal elimination of the waste material of the food and of that of the body is just as important for the purpose of maintaining continued good health. However, the reverse of this ideal hygienic condition is the rule at the present time. All mankind suffers from chronic fecal and gaseous constipation of the bowels, from infancy until relieved, by death, from self-poisoning.

From my clinical experience, I must say that no one is exempt from chronic proctocolitis, which has its inception, as a rule, from a septic diaper worn in infancy. Other exciting causes of proctitis, in after years, might be mentioned, but, the patent fact that the disease exists in infancy and childhood is sufficient for an intelligent prognosis now and in years to come if the trouble is not relieved promptly.

The final day of doom, to sufferers from proctocolitis, is hastened or retarded according to the progress or the severity of the disease with its many primary and its numerous secondary systemic symptoms.

The Consequences of Proctocolitis

Chronic proctocolitis invades all the tissues in the structure of the affected organs. The fatty and connective tissue under the mucous membrane is broken down by the inflammatory exudates that cause the formation, in the connective tissue, of submucous channels or fistulas, and, which, at the anal vent, become subtegumentary fistulas. There follows the formation of supermuscular fistulas in the tissue of the buttocks, with many branches extending in all directions. They also make their way up around the rectum, and so forth, giving rise to extensive periproctocolitis. Between the subtegumentary fistulas and the supermuscular fistulas, passing in the same direction, like a double subway, there is the deep floor of fatty tissue that has become cicatricial.

The autotoxemic poisoning of the system, from the floods of inflammatory exudates thrown off from more than 150 square inches of diseased tissue, is of itself prone to seal the destiny of the sufferer from chronic proctocolitis with all its symptoms.

All the tissues composing the anal canal and the sphincter muscles are diseased and as a rule become contracted, not only inhibiting the function of the anal vent, but also interfering with the circulation of the blood in the organs, and with the function of the rectum.

The anal stricture and accompanying inflammation produce stasis of the blood in the organs and the bearing-down or straining in the act of defecation develops rectal mucous sacs, anorectal mucous sacs and mucocutaneous sacs around the anal orifice. The strictured condition of the anal muscles and the frail, brittle anal mucous membrane is liable to tear, resulting in anal fissure or ulcer.

The inflammatory exudates in the submucous, subtegumentary and supermuscular mucous fistulas often cause pruritus of anus, scrotum and vulva.

As the vitality of the system lessens, structural changes go on from bad to worse in the mucous fistulas, one or more may become infected and develop into anorectal abscesses, giving us the symptoms associated with fistula.

All the while, the tissues of the pelvic cavity, the buttocks and the genitourinary organs are being invaded by diseased exudates; the mucous membrane of the diseased organs is undergoing serious changes. Extensive induration, ephithelial ulceration and the formation of cicatricial tissue take place, destroying the elasticity or expansibility and contractility of the organs. In the middle and upper portion of the anterior wall of the rectum is found an indurated and ulcerated region that bleeds freely on being touched.

The sphincter of O'Brien, or the third sphincter muscle at the junction of the rec-

tum with the sigmoid flexure, when diseased like the anal muscles, becomes contracted, thus lessening the bore, or caliber, of a most useful organ and resulting in the chronic accumulation in the bowels, of feces and gases; while, in not a few cases, the enema water injected above the strictured tissues of the bowel is retained.

The Evils of Constipation

Infants, children, youngsters in their teens and older fellows are constantly constipated and their tongues, stomachs, bowels and bodies remind one of the historical Augean stables, the bilge space in a boat filled with water, the furnace grate packed with ashes, an automobile with exhaust pipe closed, a chimney with top covered, the closed sewer pipe of a house. Doctors with kindly intentions pump out the contents of the stomach, all the while being unaware that they have missed the place some twenty-five feet away from the stomach by the intestinal route, that should have been pumped, or flushed, out three times a day. "Mutt and Jeff" are amusing and who can hinder doctors from assuming the role?

Sympathetic souls are worrying about our undernourished school children in this city, being anxious to stuff them with good food that goes into a foul stomach and enters intestines filled with putrid matter; owing to the occlusion of the lower bowels, from a disease that had its origin in infancy. If they are not properly treated by the doctors employed in the schools, let us do the next-best thing and furnish the anemic lads and lassies with two-gallon syringes with instructions to use water freely in the bowls morning, noon and night; the home food will do the rest.

We know the disease that is a constant fertile source of chronic autotoxemia arising from over 150 square inches of diseased surface. We know that the gastro-intestinal tract, thirty feet in length, constantly is foul from its retained ancient contents and that chronic intestinal auto-intoxication results from this condition. We know that the fluids and tisses in the human organism are doubly poisoned by a protean monster that has evaded all medical research work up to the present time. We know the dire consequences.

A Graphic Description of Neurasthenia

We know that the symptoms of the approaching dissolution of the human body from chronic proctocolitis, chronic constipation and chronic toxemia are somewhat as follows: Coated tongue, indigestion, flatulency, belching of gases, occasional diarrhea, bilious attacks, decayed teeth, ulcerated teeth, catarrh of the throat, nose and ears, impaired hearing and sight, dry harsh skin, inability to perspire, increasing anemic condition, malassimilation, denutrition, increasing nervousness and insomnia, headaches and vertigo, temporary loss of consciousness, loss of memory, inability to think consecutively, bowels distended with gases; also, pain in the appendix and other regions of the intestines, the ovaries, uterus and bladder, pains in the small of the back, the end of the spine, the buttocks and in the limbs, tired feeling, no ambition, putty or clay-colored complexion, premature signs of age, wrinkles, neuritic and sciatic pains, rheumatism in joints and muscles, hardening of the arteries, increased blood pressure, cold hands and feet, various skin troubles, with loss of hair, abnormal products in the urine, irritable bladder, gallstones, loss of from fifteen to twenty-five pounds in weight, retained adipose tissue filled with poisonous matter, marked anemia, slight physical endurance, shortness of breath, irregular heart action, prolapsed abdominal organs, distress of body and mind, loss of all pleasure in life, melancholy, desire to end it all, life being unendurable and the suffering that of all the woes of a typical so-called neurasthenic.

The battle of life and death is furiously waged in the organism of man as the toxicosis increases; other and more fatal toxic symptoms must take place in some vital organ and we have the symptoms that are designated as, apoplexy, epilepsy, asthma, cataract, appendicitis, nephritis, acute rheumatic fever, inflamed tonsils, cardiac troubles, inflammation of the lungs, bowels, liver, spleen, ulceration of the stomach and duodenum, cancer and other tumors.

All these are due to the direful results of many years of constant systemic poisoning, all the while becoming more virulent and steadily reducing the power of bodily resistance. Finally, the vitality of the body is gone and one or more vital organs cease to function, or some one of the many contagious diseases stalking around for an open door, or a favorable soil in which to incubate its virulent germs, afflict the unhappy sufferer without

meeting with adequate resistance and, thus further devitalizing the body.

To know the true normal state of the system, is vastly more important than the feeding of school children, treating decayed teeth, inflamed tonsils, nasal and ear troubles, all of which are only so many symptoms of a disease that has invaded all the fluids and tissues of the body and for the elimination of which from the body no attempt is made.

Neurasthenia, pruritus ani, piles, anorectal abscess and fistula are regarded as distinct diseases, when really they are only symptoms of a disease that begins very early in life.

Let us hope that The Medical Research Institute will get at the basic facts as to the etiology of the ills that beset and harass men from the wearing of a septic diaper to the end of his miserable incarnate journey.

The Use of Prostatic Extract for Senile Prostatic Hypertrophy

By MULFORD THEWLIS, M. D., New York City

A PATIENT, aged 70, consulted me for difficulty in urination, especially at night. He was obliged to get up several times and had considerable pain and difficulty attending micturition. Finally, I was forced to catheterize him with a metal catheter.

Upon examination, the prostate was found to be much enlarged and urinalysis revealed a chronic interstitial nephritis. I gave him a saline laxative each day, advised a diet of milk and cereals for a few days, and prescribed tablets of prostatic extract, each tablet containing ten centigrams of the substance of the prostate gland, one tablet being given every three hours. He was relieved on the second day and catheterization became unnecessary. He improved from day to day, and, in the course of a week, had nearly returned to a state of normal senility. He continued the use of the prostatic extract and his condition has improved.

I have employed the extract of prostate in several cases with equal benefit. It also relieves the nervous symptoms attending prostatic hypertrophy and neurasthenia which often accompany this condition.

Opotherapy is an important therapeutic aid in the practice of geriatrics. While studying in Paris, I recently purchased several different extracts, and believe the French products to be superior to ours. As far as I know, it is not possible to obtain prostatic extract in the United States.

The French extracts are prepared with great care and much attention is given to the age and health of the animal from which they are taken. The method of preparation is somewhat similar to that of the thyroid extract. It is possible to obtain the prostatic extract in ampules for hypodermic injections, which greatly adds to the results in many cases and is more practical in serious conditions.

There are many methods of treating prostatic hypertrophy without surgical measures, and I have had many cases that were relieved without radical procedures. Many of them were secondary congestions from senile-nephritis. Attention to the senile kidney often will relieve the disease. The results from the use of prostatic extract are very encouraging.

What Others are Doing

SPARTEINE SULPHATE

Sparteine sulphate is not used as much as it deserves to be. It can often be used where digitalis is contraindicated, as it has none of the disadvantages of that remedy.

In *The Homeopathic Recorder* for November 15, 1918, is an article by Dr. Albert E. Hinsdale of Columbus, Ohio. It gives the results of experiments with sparteine sulphate on some healthy medical students, and the physiological action on the frog, turtle and dog.

In examining the literature, the writer could find no record of the action of sparteine upon the normal human being, it appears as though all studies have been conducted upon lower forms of life. It was thought that experiments upon the human might confirm or reject previous statements about the drug and at the same time bring out new points in its action.

Three healthy medical students participated in the proving. Previous physical examination showed them to be normal in every way. The drug was administered by mouth as follows:

For the first eight days of the proving, a dose of one grain was given at 6:30 a. m., another at 11:30 a. m., and the third dose was taken at 6:00 p. m. On the last two days, the dose was increased to two grains, taken at the same times as before. The following are the effects:

1. The total amount of the urine for twenty-four hours was increased. This was true for each prover. The average twenty-four-hour amount of urine passed by all provers, previous to the experiments was 1011 mils (Cc.). At the conclusion of the proving this became 1251 mils.

The specific gravity was scarcely affected. The drug produced no changes in the urinary excretion aside from influencing its total amount; the increase in volume appeared upon the second day, reaching an amount that was not materially altered throughout the remainder of the proving.

2. While under the influence of the remedy, the blood pressure of each prover was taken three times a day, one hour after each dose of medicine. The Tycos instrument was used. The effect of sparteine sulphate was, to cause a lowering of the systolic and diastolic pressures in all provers. The average systolic and diastolic readings for all provers, for three days previous to the experiment, were 119 and 82 respectively. At the termination of the proving, these average pressures became 108 and 65.

3. During the proving, the pulse was counted one hour after each dose. The normal pulse rates for the provers were obtained by averaging the morning and evening pulse rates, taken for three days before giving the drug. A comparison with the normal, of the average pulse rate of each prover as it was daily influenced by the drug, showed that the rate was reduced in each prover. In two instances, the slowing appeared upon the first day, and continued until the drug was discontinued. Upon the last day of the proving, the average reduction in the frequency of the pulse rate was ten.

The frog's heart is affected by sparteine. In a large series of experiments, a slowing in the heart rate was manifested in every instance. The slowing is about evenly distributed over diastole and systole, but the greater reduction is seen in the former.

If a strip of isolated turtle's ventricle, properly mounted and connected to a recording apparatus, is allowed to contract in a solution composed of ½ gr. of sparteine dissolved in 4 ounces of 0.7 percent saline solution, a slowing in the rhythm is produced. This occurs in what corresponds to the diastolic pause.

These and other experiments lead us to draw the conclusion that sparteine sul-

phate depresses the heart by poisonous action exerted on the myocardium and that this, with the stimulating action of the drug on the vagus, accounts for the lowered blood pressure and reduced pulse rate. It is not a cardiac stimulant; at least nothing in the experiments would warrant this conclusion. In fact, the opposite is the effect. From the findings obtained, one can agree with Sayre who states that the drug has diuretic properties and is useful in dropsy.

The homeopathic employment of sparteine would probably be in such conditions in which hypotension is a prominent symptom; the various infections, toxemias, profuse hemorrhage, shock and collapse.

As to the dose, the minimum should be not less than ¼ grain by hypodermic injection, or ½ grain by mouth. Doses as high as two grains by the mouth, three or four times a day, are perfectly safe; only disappointment can come from the use of much smaller doses. Sparteine is a safe drug and prompt in its action. It exerts an action different from that of digitalis. Digitalis strengthens the contractions and raises the blood pressure; sparteine lowers the blood pressure and weakens the cardiac contractions.

POSTURAL ALBUMINURIA

Albuminuria is generally considered as indicating renal trouble. It usually does. An interesting case of postural albuminuria is given by Dr. Malcolm Mackay, in *The Canadian Medical Association Journal* for November last.

This was a case referred to the author for consultation. The patient was a young man, twenty-seven years of age, who was rejected by three medical boards on examination for the flying corps, the reason for rejection being that he was suffering from nephritis. As he had just been married and considered himself physically sound, he returned to the family physician, only to have the diagnosis confirmed. A second specimen taken later, however, showed not a trace of albumin.

The patient was a young man, tall and rather slight, with a somewhat marked lordosis in the lumbar region. He was of a rather nervous disposition, but having no complaints except weakness, which he attributed to restrictions in diet. Examination of the urine passed in the morning, upon arising, showed that it was acid, specific gravity 1026, no sugar, no albumin, no casts; but a specimen passed in the office showed marked albumin, both on boiling and with cold nitric acid. Cold acetic acid showed a cloud. The patient was then instructed to lie down, and, half an hour later, a normal specimen was passed. Next he was placed with his back against a wall and in twenty minutes the urine was loaded with albumin.

These experiments were repeated on several occasions, and the urine invariably showed some albumin after exertion, and a great deal after a very erect posture was assumed.

These patients with nonnephritic albuminuria, have no nephritis, but are, as a rule, nervous, poorly developed, and are generally below par, and our treatment must be designed to build them up and improve their general tone. Correction of posture, plenty of food and fresh air, with regular and regulated exercise, will, as in the case cited, bring good results.

DIET IN INFANTILE DIGESTIVE TROUBLES

There is a practical and interesting article, in the *New York Medical Journal* for September 27, 1919, on diet in digestive diseases in infancy, contributed by J. P. Crozier Griffith, of Philadelphia. A review of the principal gastrointestinal diseases of children is given and an outline of the diet suitable for each condition.

The topic is a very comprehensive one and can be reviewed only superficially, here, with an effort to touch upon certain salient points in selected subjects. We shall, therefore, discuss the following disorders only: (1) acute gastric indigestion; (2) acute diarrhea; (3) acute gastroenteric intoxication; (4) ileocolitis; (5) chronic gastric indigestion; (6) chronic intestinal indigestion. Some consideration must be given to the causes of these, in order to enable us to discuss the diet intelligently.

1. *Acute gastric indigestion.*—As a matter of convenience, we may include gastritis with this trouble. The infant may have received too large a quantity of milk, or the food may have been chemically unsuitable, possibly because changes have taken

place in it before it was ingested, or because the composition of the milk mixture may have been entirely faulty.

The chief symptoms are, vomiting and abdominal pain, and, later, if the irritating substance has passed into the intestine, diarrhea.

The dietetic treatment usually is simple. No food whatever should be given for at least twenty-four hours, with the exception of barley water, which really is no better than ordinary water but is more satisfactory to the mind of the mother. Indeed, if the vomiting is very obstinate, it may even be better to withhold water altogether, giving any liquid that is required by way of the rectum. The important matter is, that there should be no hurry in returning to the ordinary foods.

2. *Acute diarrhea.*—The causes of this condition are much the same as those of acute gastric indigestion. In fact, acute diarrhea often is a sequel to acute gastric indigestion. If the stools contain curdy masses in a greenish or yellowish watery fluid, with a small amount of mucus, the fat is not being digested. If they are smelling sour, causing excoriation of the buttocks, there is too much of carbohydrates undergoing an acid fermentation.

The same dietetic management should be employed as in acute gastric indigestion, keeping, however, the character of the stools in view. It is particularly important to be slow in getting back to a milk diet. Milk, which seems to be natural food for an infant, often becomes dangerous, when gastroenteric disturbances are present.

3. *Acute gastroenteric intoxication.*—This is a much more severe type of gastrointestinal disorder, in which, in contrast to the diseases already mentioned, we have the element of decomposition of the tissues, giving rise to toxemia. The constitutional symptoms are much more dangerous than the local symptoms. It may be primary or follow an ordinary diarrhea.

The fever, here, is of longer duration than in the first two diseases and is accompanied by the usual toxic symptoms of prostration, sunken eyes and, even, unconsciousness or convulsions.

The great desideratum in the treatment of gastroenteric intoxication is, not to allow it to occur. Weaning in summertime should be avoided if this is feasible in any way. Every possible care should be taken to avoid bacterial contamination of the food. The milk should always be pasteurized at home during the hot weather. During this period, the quantity and strength of the food should be diminished. The dietetic treatment is similar to that already outlined and the return to ordinary food must be slow. An abundance of water should be given to prevent drying of the tissues, as well as the production of an acidosis, both of which probably are prominent factors in bringing about the toxemic symptoms.

The return to the ordinary diet may be made by means of broths, thickened with a starchy substance. Where there is little appetite and not sufficient food is taken, concentrated cereal decoctions in the form of gruel serve a good purpose. Often, they are retained and digested when milk would not be well borne.

4. *Acute ileocolitis.*—The fact that this is an inflammatory disease must be borne in mind, otherwise the persistence of fever, which is one of the symptoms, might lead us to withhold food for too great a length of time on the ground that the child still showed evidences of toxemia. The condition is not toxic but inflammatory. Its characteristic symptoms are, not, the loss of large quantities of fluid, but, the frequent passage of small mucous stools without straining.

Milk should be entirely avoided at first and possibly even throughout the whole attack. As the disorder usually lasts several weeks, it is necessary to see to it that the infant takes sufficient food.

Strong gruels also may be employed and, sometimes, may be dextrinized to advantage. However, dextrinized foods and broths at times increase a diarrhea. Albumen water may be resorted to to supply the protein which is needed and scraped beef may be of service. Finally, one may return to a milk diet by the use of whey, skimmed milk, casein-buttermilk, and the like. All of these have the advantage of being comparatively free from fat, which, often, is not well tolerated by infants suffering from gastrointestinal disturbances.

5. *Chronic gastric indigestion.*—This condition is the cause of the troublesome

cases of vomiting in infancy. The disease usually is a sequel to one or more attacks of gastric indigestion from which recovery has not been satisfactory. Frequently, it is brought about by the continued use of a milk mixture which is not suitable for the infant. Very often, the fat in the food is present in too large an amount. Various constitutional diseases, such as rickets and tuberculosis, are powerful predisposing factors.

The most important symptom is, the frequently repeated vomiting which interferes with the retention of food sufficiently not to allow the child to progress in weight. More or less mucus may be present in the vomitus in cases which are long continued. It is very important in this connection, before determining upon the diet and other treatment, to be sure that the case actually is one of chronic indigestion and not of some other disease.

If all these matters are eliminated, we then have to study the character of the food given. It may be too rich in fats and the sugar may be in excess. First, the fat should be reduced and, for this purpose, a buttermilk mixture is very serviceable. This consists of buttermilk fortified by the addition of wheat flour and sugar, raising the total carbohydrate to possibly ten or eleven percent. In other cases, the casein of milk is borne very well.

In malt soup and in buttermilk, the presence of unconverted starch serves a good purpose. In some way, probably mechanically, it aids very greatly in the digestion of the protein and probably also of the fat.

6. *Chronic intestinal indigestion.*—This is a very common and exceedingly troublesome disease. It may be associated with chronic gastric indigestion or may occur alone. It may be brought about by poor hygienic surroundings, by a congenital constitutional debility, or may follow an acute ileocolitis; but, of all factors, the most frequent one is, the continued employment of an unsuitable diet.

The symptoms vary with the case. In some, there is constant diarrhea with watery, greenish, and sometimes curdy stools. If there is a large amount of mucus present, it is probable that a chronic ileocolitis of mild grade has developed. If there is but a small amount, the disturbance is largely functional. In other cases, the stools are diarrheal only at times, but, for the most part, they are pasty and of the soapstool character. Here, the fats are clearly not being digested.

It is very much easier to prevent the occurrence of chronic intestinal indigestion than it is to cure it, and the most important factor here is, to avoid weaning, if possible. Then, too, in the instances where the breast milk is insufficient, it is far better to help out with supplemental feedings than it is to wean entirely, since the breast milk, as far as it goes, supplies elements which the cow's milk does not contain.

If an acute exacerbation of the symptoms be present at the time, we may begin with a temporary partial starvation, using a thin cereal decoction or arrowroot water. After this, the nature of the diet will be determined to some extent by the nature of the stools.

The fat is most often at fault; the carbohydrate, if the stools are very liquid, of an acid character. In the event of the first, we may begin with a skimmed-milk mixture or, better still, buttermilk. The presence of lactic acid in the buttermilk seems to have a decidedly beneficial effect.

With regard to all these substitutes for the ordinary diet, it should be borne in mind that they are but substitutes, and that in most cases it is wise to return as soon as convenient to a regular milk mixture suitable for the condition of the child. There should, however, be no undue hurry about this, and it is perfectly possible to feed an infant satisfactorily on a buttermilk mixture or malt soup for months at a time. Indeed, if the child is found to be thriving on it, there is really no reason at all for a change, until the age of a year is reached, when the ordinary diet for that age may be instituted. All this must be determined in the individual case.

HYOSCINE IN DELIRIUM TREMENS

In the *British Medical Journal* for December 6, 1919, Dr. F. Wyatt-Smith recommends the use of hyoscine in very large doses (1/33 grain) for the treatment of delirium tremens. In sudden emergencies, and for immediate effect, the Doctor looks upon this drug as the best hypnotic. He says that, in adequate dosage, it has never

failed him, and has never given him a moment's anxiety. He believes that, usually, it is given in too small doses.

As an evidence of its safety, he refers to the experience of a colleague who suffered from heart disease, with anasarca, orthopnea and insomnia. He found it the most satisfactory of all the hypnotics, until, after fourteen doses of 1/75 grain each, it lost its effect. Doctor Wyatt-Smith says that in delirium tremens the effect of hyoscine is very transient, and it must be repeated at frequent intervals, say, every four hours.

LOBELIA IN EPILEPSY

In *Ellingwood's Therapeutist* for November, 1919, there is an account of a case of epilepsy treated hypodermically by means of lobelia. The patient was a man sixty-eight years old. This patient would occasionally have two or more attacks each day and at times four or five each week, some of which would be very severe.

The doctor arranged to have him brought to the office every day. He began with a hypodermic injection of lobelia gradually increased to, but never beyond, thirty minims each day, and there were no more convulsions. The doctor's observation was, that the heart's action was materially increased in force and strength. It became steadier and the general nerve tone was increased. Four months later, the patient died of another illness, but, there had been no return of the epileptic attacks.

DAKIN'S SOLUTION AND DICHLORAMINE-T IN PROCTOLOGY

Dr. J. Coles Brick (*Nashville Jour. of Med. and Surg.*) said that Dakin's solution presents many difficulties in its preparation, is unstable when made, tends to become caustic, and will not keep. Chloramine-T gives up its chlorine less rapidly, has greater antiseptic value and is less irritating. Dichloramine-T solutions are unstable, and, when prolonged germicidal action is required, it is preferably used in an oily solution, the preparation of which is described. Chlorcosane is preferred as a solvent. He quoted Dakin and Dunham to the effect that "Chloramine-T and dichloramine-T give materially better results than the hypochlorites when acting on organisms in a blood medium."

He reported the case of a patient, greatly debilitated by a persistent mucopurulent diarrhea from a hemorrhagic catarrhal proctitis, sigmoiditis and colitis, the etiology of which was not demonstrable. Treatment by colonic irrigations with antiseptic and astringent solutions, first by rectum and then by means of an appendicostomy, were of no avail till, finally, Dakin's solution was used up to 10-percent strength through the appendicostomy wound, with immediate improvement and final cure.

The writer was led then to use these agents through the sigmoidoscope as adjuvants in the treatment of cases of amebic dysentery and concludes that they will prove valuable parasiticides in rectocolonic infections.

GELSEMIUM IN MALARIA

A southern physician, Dr. J. R. Mac Daniel, of Nashville, Tenn., (*Ellingwood's Therapeutist*, Nov., 1919) advises the use of gelsemium in malaria. During the civil war, medicines were so hard to procure, particularly quinine, that various substitutes were used. Gelsemium was commonly used for the treatment of intermittent periodical fever, especially as a preventive, taken just before the advent of a chill.

The writer regards it as a specific for preventing the chill. The tincture of gelsemium, U. S. P., was used in combination with tincture of capsicum; fifteen or twenty drops of each in water or whisky. This dose was given two or three hours before the time of the chill and repeated in from half an hour to an hour, and again, in reduced quantity, an hour later, unless the characteristic symptoms of the gelsemium on the eyes were apparent. The writer has never seen any bad results in his own cases. He has, however, seen patients (not his own) almost blind and limp of body from overdoses of the drug.

THE JUGULATION OF "COLDS"

A New York practitioner, Dr. L. Duncan Bulkley, recommends a remedy for common colds and grip, which he has used for

the last twenty years, and, with remarkable success. (*Medical Record,* Oct. 11, 1919.)

The Doctor states, that he had a very severe cold, which had been coming on for several days and had been neglected. "I had sneezed and coughed all day, using any number of handkerchiefs. In the afternoon, I took one or two doses of soda, half a teaspoonful, and in the evening took five more, at half-hour intervals, in warm water. At midnight, I took one of the grip powders that I have prescribed so long, namely, 10 grains of phenacetin with 20 of soda, with hot water, and went to bed. I dropped to sleep and slept soundly until called at seven-thirty, when I took another phenacetin and soda powders. The cold was entirely gone.

"Last year, from October to late spring, I ordered the phenacetin and soda powders, 10 and 20 grains, almost every day and sometimes at least four times in the day, for patients threatened with grip and, although I questioned many patients, at subsequent office visits, I have yet to learn of any failure to arrest the trouble.

"To be successful, the treatment must be carried out rigorously and fearlessly in the full and repeated doses mentioned; for, many physicians to whom I have mentioned it have questioned the dose and feared to give it. Frequently, I have had patients who took a dozen powders within a day or two, with only good results. I only ask that the profession make trial of what I have here written and report the results good or bad."

TREATMENT OF CONSTIPATION

There is a very practical article on the primary causes and hygienic treatment of constipation, in *The New York Medical Journal* (Nov. 8, 1919), written by Dr. Dwight H. Murray. The writer believes that early violations of Nature's laws are a considerable factor in ill health later in life. The primary causes of intestinal and systemic constipation are, carelessness, ignorance and laziness.

The trouble begins early in life. The child does not know the importance of going to stool at a regular time each morning and, also, the necessity of imbibing plenty of fluid. Bad habits begun early in life are hard to break and the child prefers to play, rather than to spend the time in attending to his toilet obligations. The bowel becomes insensitive and, finally, will not act without a cathartic. Then, later, autointoxication starts in with all its unfortunate consequences.

The total amount of fluids eliminated each day, through skin, kidneys, lungs and bowels is from seventy to eighty ounces. If the total ingestion of fluid falls much below this amount, normal elimination suffers in proportion, with a relative concentration, more difficult elimination of the excreta, and retention of some of the effete material in the system.

It is noteworthy that, in a large proportion of cases of rectal and colonic diseases, the patients give a history of drinking only twenty-four to forty ounces of liquids daily. Where the necessity of drinking more is explained to them, they recognize its importance and wonder why they never were advised of it before. Almost everyone knows of people who have lived most exemplary lives, and, yet, died prematurely from some disease of kidneys, heart or liver. The history of these cases probably would show that too litt'e fluid was ingested and the resulting diseases were the natural consequences of systemic constipation.

In treating patients who are constipated and in whom there has not yet developed actual rectal disease, all cathartics are discontinued unless an emergency arises. The taking of eight to ten glasses of water daily is advised, two at once or during the first half hour after rising. Then, the patient is to sit on the toilet for at least ten to fifteen minutes in an honest effort to have a stool, even if the desire is not present. In case of failure, an enema of plain water should be taken at once, in order to help the bowel acquire the habit of emptying itself at a regular time.

The crux of the whole matter is, sufficient liquids for the system; a regular time for the movement at or near arising, without regard to whether the call is present or not; and to follow this effort with the plain water enema at once. Patients must not expect immediate results. If it takes a year to recover, it is well worth it; cathartics will not accomplish curative results, and the method outlined by Doctor Murray is, in his opinion, the only safe, and the nearest to the natural way out of the trouble.

Let's Talk it Over

Postinfluenzal Alopecia

AMONG the most distressing aftereffects of influenza, especially to female patients, is, the loss of hair which in some cases all but assumes the proportions of a calamity. Young women tearfully report that their hair "comes out by the handful" and children have been seen going about looking very much like Samson after Delilah had operated upon him. The demand for "something to stop this loss of hair" is insistent and physicians throughout the country, responding thereto, have been chagrined to find most of their prescriptions absolutely ineffective. The hair continued to "come out" and not a few of their patients became almost bald and refused to be comforted even when their attention was called to the "beautiful new growth" which, like fine fluff, covered the scalp. Occasionally, even this new growth failed to make its appearance and a few cases have been reported where disfiguring bald patches persisted— a true alopecia areata.

Generally, however, the loss of hair was fairly evenly distributed, though, in not a few cases, this writer observed that it was most marked about the occiput and in the temporal regions. In his experience, the longer the preceding illness and the higher the temperature range, the more certain and pronounced the subsequent loss of hair.

After many fevers or other acute systemic diseases, *defluvium capillorum* is observed, but, almost always, regrowth takes place; hence, it is reasonably safe to regard the condition as due to direct irritation by toxins of the trophic nerves or, primarily, of the tissues. In other words, we have to deal with a trophoneurosis, not a local parasitic disease.

Therefore, if we are to secure results, we must not confine ourselves to the use of stimulant and "antiseptic" lotions, but must administer systemic alteratives and reconstructive tonics. In very few cases, indeed, will such treatment, instituted as early as possible, fail to stop the loss of hair. Moreover, the subsequent locks probably will be more luxuriant and glossy than the original.

It is, of course, necessary to point out to the patient that the loss of hair will not cease suddenly, but, each day, there will be "less hair in the comb and more on the head." Usually within ten days or two weeks, the hopelessly dead hair has all fallen and the patient realizes that her doctor has really "done something." Later, as has already been stated, she is *quite sure* that he knew what he was doing and is inclined, then, to be grateful, practically and in deed.

Admitting, to avoid controversy, that in all cases the condition of the individual patient's scalp and general health must be considered and that, as we do not yet understand exactly either the causes of influenza or the changes that the invading bacteria produce in the body, all treatment must be more or less empirical, the writer ventures to predict that the exceedingly simple procedure outlined herewith will, in virtually every instance, produce the desired results.

Instruct the patient to wash the hair and scalp very thoroughly with carbenzol or a really good tar soap and, then, rinse well with *hot* water, in which a little borax has been dissolved. This procedure should be carried out every third night for two weeks. The next morning, one-half to one dram of a stimulating lotion consisting of tincture cantharides, 1 dr.; tr. capsicum, 20 minims; castor oil, 1 oz.; alcohol to make 4 ozs., is rubbed lightly into the scalp with a small pledget of cotton. If, for any reason, castor oil is objectionable, bay rum may be substituted

for it and the alcohol; however, the castor oil is a most desirable ingredient.

Internally, the patient should receive the arsenates of iron, quinine and strychnine, in rather full doses, three times daily after meals; nuclein may be added with advantage. Growing children respond very promptly to strychnine arsenate, gr. 1/500; quinine arsenate, gr. 1/32; iron arsenate, gr. 1/32; nuclein solution, min. 4, after each meal, and iron phosphate, gr. 1/12; calcium phosphate, gr. 1/12; potassium phosphate, gr. 1/12; magnesium phosphate, gr. 1/12; nuclein solution, min. 4, every three hours—preferably half an hour before eating.

Daily massage of the scalp and frequent exposure to the sun and air are desirable and, in more than one case, the use of the high-frequency current (vacuum electrode) every second or third day has exerted a decidedly beneficial effect.

GEO. H. CANDLER.

Chicago, Ill.

SYSTEMATIC URANALYSIS AS A PRACTICE BUILDER

One takes chances nowadays in using the word "service" as much as the overworked word "efficiency"; but, back of both are basic principles which, rightly understood, make for success.

Not a physician graduating in the last twenty years but has had a more or less complete course in practical uranalysis. But, few of them realize the real importance of the knowledge gained by a few tests that any physician can easily make. Fewer yet recognize the possibility for practice building in rightly working the plan suggested in this article.

It may not be generally known that several companies make a bid for this service element reaching many thousands of "big people" and others who pay a substantial fee for quarterly reports on work in which any physician with a little practice can soon become proficient.

The same procedure may be carried out by you to your financial advantage and professional standing even though limited to your own patients. In fact, systematic uranalysis will increase your clientele.

Equipment Necessary.—The instruments needed should include test tubes, test tube holders and racks, funnels, glass rod, pipettes, beaker glasses, litmus paper, urinometer, graduates, Doremus ureometer, indicanmeter, acidimeter, albumenometer, labels, record books, Bunsen burner or alcohol lamp, and clean bottles and corks for specimens.

The whole outfit will not cost much unless you wish to include a microscope and centrifuge which are very desirable. The financial returns will pay good dividends.

[For good work, the microscope will be found indispensable. However, it can be purchased on easy payments and will soon pay for itself.—ED.]

Do not purchase the neat little compact box of urinary test instruments as offered by surgical instrument houses. Better select your own outfit and set aside sufficient space in a room suited to the purpose, so that everything is always on exhibit if need be and always in working order.

Before pushing your plan, assemble your oufit. Get your equipment in working order as results will come in before you may think. Better have a few too many instruments or too generous a supply, than too few.

Systematic work and systematic records with prompt, on-time, follow-up service and collection of the year's fee at the first examination are the keys to success. The plan is self advertising.

Outline of the Plan.—Naturally, a beginning diabetes of either variety, or an early nephritis or a bacilluria, when detected in the incipient stage, can be more readily cured and at less expense and with a better prognosis. Talk or write to your patients on the importance of a full measure of health for the full enjoyment of life. A well worded letter will cover the ground more quickly than a personal interview. Emphasize the ease with which essential information may be had by simply sending a sample of urine three times a year.

It will tend to establish confidence on the part of your patient if you have printed forms for reports.

Out-of-town people should be furnished with mailing tubes and you should see that these are systematically mailed out on specified dates. Insist on cooperation by the patient to the extent of prompt return and institute your own follow-up system to see that this is done.

Often, a contract will lend force to your work and in this you will protect yourself

against responsibility if "the party of the second part" fails to submit samples when due. It is an appreciated courtesy on the part of the writer if his dentist notifies him at regular intervals that a dental examination is desirable now. Naturally, the patient is linked up to a man who is so much interested in the personal welfare of his patients as to remind them of preventive health measures. The scheme will work out beautifully in medical practice as well.

This is not the place to enter into the tests necessary. The subject is well covered in such books as Webster's "Laboratory Diagnosis," and the one by Stitt, published by Blakiston, Philadelphia.

Bearing in mind the practice-building possibilities in this suggestion, properly worked out, you will want to exercise the business principles of accuracy and regularity, not only in the examination and your reports to your patient but in the collections and the follow-up work as well.

Be enthusiastic as to the reality of the service you are rendering. Talk success and it will react on the principle of sowing and reaping and your practice will be bigger and better in increasing financial returns and those indefinite but real evidences of the things that make for success.

FRANK B. KIRBY.

Chicago, Ill.

CHLORAZENE FOR DIARRHEA

In the issue for January, 1920, of your esteemed magazine, I read with great interest the two articles on the internal use of chlorazene. Assuming that they may be of interest to some of your readers, I am enclosing reports of two cases in which I used chlorazene internally.

Case 1. Dec. 6, 1919. Miss A. S. age 17. Diagnosis: Acute gastritis. History: Patient had partaken of rich food at a party just a few hours before I was called in. Symptoms: Burning and sharp pains in epigastrium, constant vomiting for several hours; the watery vomiting containing small amounts of blood, mucus and bile. The abdomen was distended and tender, particularly in the umbilical and hypogastric regions.

There was a disagreeable, metallic taste complained of, also thirst, headache, and dizziness. No relief followed the vomiting. The tongue was coated, the breath foul. Severe diarrhea was present, associated with great pain and spasms of the sphincter ani. The pulse was weak and rapid (115). Temperature 96.4°. The skin was moist, cold and clammy.

Treatment. A high rectal enema was given containing 0.25% of chlorazene in warm water, and a hypodermic injection of gr. 1/60 strychnine administered. Mustard plaster was applied to the epigastrium, hot water bottles to the body. Internally I prescribed.

R/ Hydrargyri chloridi mitis ..... gr. 1
Podophyllini ..... gr. 1
Bilcini ..... grs. 2-3
Strychnini arsenitis ..... grs. 6-250
Sig.: In divided doses. To be followed by:
R/ Chlorazeni (Abbott) ..... grs. 3-4
Bismuthi subgallatis ..... grs. 3
Carbonis ligni (recent) ..... grs. 7
M. Ft. Caps. D. t. d. ..... No. 12
Sig.: One ever 3 hours till relieved.

Of course, a suitable light diet was prescribed.

The result was, that, immediately following the enema, the diarrhea abated somewhat. Complete recovery ensued in six hours after the first dose of chlorazene. I kept the patient on them for two days, however. There was a slight urticaria produced but, no other untoward symptoms.

Case 2. Dec. 16, 1919. Mrs. I. R. age 22. Diagnosis: Acute enteritis.

The history was negative as to dietetic errors, no toxic substances having been ingested. The trouble possibly was due to chilling of the body surface. The symptoms were, acute diarrhea with colic and tenesmus. Inspection and examination revealed borborygmi, tympanitic abdomen, cold and clammy skin. The pain was severe, the patient bent over with a pillow pressed to the abdomen; being slightly relieved by evacuation. Thirst was present but, injecting water into the rectum gave rise to vomiting. Temperature 98°. The pulse was feeble and rapid. The stools were thin, watery and contained mucus. The treatment was, rest in bed, with a light fluid diet. A hypodermic injection of morphine sulphate, gr. 1/12, strychnine sulphate, gr. 1/100 was administered; also an enema of a 0.25% solution of chlorazene in warm water; while hot water bags and other hot appli-

cations to the abdomen were employed. Magnesium sulphate was ordered in a ½-ounce dose.

R/ Chlorazeni (Abbott) .....gr. 3-4
Bismuthi subnitratis .....gr. 4
M. Ft. Caps. D. t. d.....No. 30
Sig.: One every 2 hours till relieved.

The result was that, the next day, there was no more diarrhea; the pain was relieved, temperature and pulse were normal. I ordered the patient to continue taking the powders for two days. No untoward symptoms followed the ingestion of chlorazene.

I believe these two cases warrant the continued use of chlorazene, at least until some toxic property is proved against the remedy. I believe that Doctor McCready has started a line of experimentation that will yield good results and that he deserves thanks for his excellent work.

REGINALD WEILER.

New York, N. Y.

A THERAPEUTIC SYMPOSIUM

I am glad that the progressive editors of CLINICAL MEDICINE have opened the columns of the paper, as a free forum of discussion, for the exchange of opinion concerning the different methods to be used in the treatment of disease and have invited their readers to freely express their ideas on the subjects discussed, giving their experiences for the benefit of all. Availing myself of the opportunity thus afforded, I take the liberty to submit a few questions, which have recently come up in my mind.

First: Great changes have taken place in the treatment of syphilis. Mercury and potassium iodide have not been supplanted by any means, but, they have been supplemented by arsphenamine (salvarsan, or "606"). To begin with, in the administration of mercury, what is the choice of form —mercury proto-iodide by the mouth, or the 10-percent mercury-salicylate mixture in Russian oil injected hypodermically into the gluteal region? In the latter procedure, have you noticed any abscess formation? As to the intravenous administration of arsphenamine, in your opinion, is it the only method? Should it also be given, as an alternative method by the mouth or the rectum? If it should be, what is the vehicle of your preference, the tablet or the solution? The dose of arsphenamine is one decigram for every thirty pounds of body weight. In the Boston-Dispensary clinic, one decigram of the drug is dissolved in twenty mils of distilled water, then neutralized by 15 percent of NaOH (C. P.).

Second: What is your experience in the uses of iodized calcium in the treatment of croup and allied catarrhal conditions of the larynx? Have you ever used it in incipient goiter in young girls for its iodine effect?

Third: In the treatment of typhoid fever, have you ever used sodium sulphocarbolate as an intestinal antiseptic? In your opinion, does it check the putrefactive process and thus prevent ulceration? Have you noticed the disappearance of the foul smell under its administration? What is your opinion concerning its efficacy in the treatment of gonorrhea?

Fourth: We know about the uses of creosote in the treatment of phthisis. Just now, a new preparation has reached the profession. It is called "calcreose" a combination of calcium and creosote. Have you ever tried it in the treatment of acute bronchitis, pneumonia and phthisis? Is it what is claimed for it?

Fifth: Very considerable depression has been observed after the hypodermic administration of apomorphine. In your opinion, should we control its use by the conjoint administration of strychnine?

Sixth: Carbolic acid, in its toxic doses, contracts the pupils, lowers the temperature, diminishes the blood pressure, cools the surface of the body. It has been ascertained that atropine is a physiological antagonist to carbolic acid in its toxic action. In your experience, has glonoin (nitroglycerin) any value in neutralizing the effects of carbolic acid?

Seventh: What is your opinion concerning the value of nitroglycerin in its conjoint use with iron in the treatment of anemia?

I have just terminated attendance on a serious case of pneumonia which almost taxed my resources; but, fortunately, (thanks to the good Lord) we pulled through and, this very morning, I discharged the patient, both of us beaming with smiles of joy.

A man, 52 years old, plethoric in build, tailor by trade, suddenly stricken by a shivering chill on Tuesday, January 13. He takes to bed on the same day and his good wife promptly applies six dry cups to the

area of pain, posteriorly in the base of the right lung. Let me here say, parenthetically, that the life-giving blood is poison in the inflamed area. We must, therefore, take it away from that area, and jugulate the inflammation. I was called in the afternoon of Wednesday, January 14. I found the temperature almost 103° F., pulse 120, bounding, and the respiration 32 per minute. The pain in the affected side was acute. All the classic symptoms were present: Rusty sputum, cough, anorexia and prostration, in addition to the fever and pain. Physical examination showed no marked dullness. Resonance was not yet impaired to any extent because consolidation was not complete. Auscultation gave numerous and distinct sonorous (squeaking) rales. Now, if this was not a case of pneumonia, I do not know my business. But, my problem was, to prevent the first stage of congestion from merging into the second stage of consolidation or red hepatization. The man had a good and clean home and an intelligent wife ready to help me in every way.

What did I do? I took a heaping teaspoonful of table salt, dissolved it in a glass of warm water and poured it into my fountain syringe which I filled up to two quarts with warm water. The enema cleaned the bowels thoroughly. On taking the temperature once more, it was found to be 101.6°, a fall of 1½ degrees. Into a small cup, I put ten granules of a defervescent compound containing aconitine, digitaline and veratrine, and told the lady to give one every half an hour with hot water, and in the resolving power of which I thoroughly believe.

No cold or iced water for me in the treatment of pneumonia. I told the good wife to give the patient orange juice whenever he felt overcome by the fever. For the acute pain in the side, I injected ¼ grain of morphine with 1/150 grain of atropine. Then, I applied, with my own hand, a hot thick poultice of antiphlogistine, covered with a warm towel, and snugly bandaged around the chest. On the morning visit, I found the sick man more comfortable, but, the fever was still 101.6° F. Now was my chance to give a thorough trial to the iodized-calcium tablets for their iodine and antiseptic effect. All through the week, the patient received this remedy alternately with calcreose (calcium and creosote) at hourly intervals. Under this treatment, the rusty sputum disappeared, resolution set in early, and the expectoration became normal and white. Every day, I ordered one teaspoonful of epsom salt in hot water and moved the bowels three times. I was absolutely sure that I had secured intestinal antisepsis. The food was nourishing and supporting. No stimulants of any kind were used. I visited the patient once or twice every day. This morning (Jan. 21), the temperature was normal and upon auscultation I found all rales gone. Discharged the patient well with some precautions.

H. S. Jelalian.

Watertown, Mass.

[Doctor Jelalian's questions may be passed on to our readers whom we ask to reply to them, according to the results of their experience. That case of pneumonia that the Doctor brought to a successful termination was handled splendidly. The present writer advocates, and employs, virtually the same procedures, including drugs, that produced such pleasing results in Doctor Jelalian's case.—Ed.]

ARRAIGNMENT OF THE FLY

Thou seemingly innocent and guileless fly,
That tick'lest baby's nose in merry sport,
And viest in most playful mood with him
For sweets, spread o'er his tempting lips and cheeks;
Then on the bald and shining pate of man,
In jestful vein, thou glidest in delight,
With no more seeming reason save to tease.
Yet, from thy nature and insidious ways
Thou hast become man's enemy most dread,
A fitting ally of disease and death.

With such grim consorts art thou ever found
Where plagues are rife and virulence abounds.
Thou dost infest all groaning battle-fields
To feed thyself on foul, corroded wounds,
Both on the dead, and on the helpless quick.

Thou feedest, too, on carcasses of dogs
That long within the arid summer's glow
Have festering lain, until the air is filled
With noisome smells that sicken and disgust.
Here dost thou plant thy larvæ-forming seed,
Which propagates into a seething mass
Of baneful, loathsome, pest-creating life.
E'en as the fragrance of the purest rose
Doth charm, alluringly, the useful bee,
So art thou charmed by all that is unclean.
When glutted to satiety with pus

Which is attractive to thy taste depraved,
Thou leavest putrid flesh reluctantly,
Thy body weighted with destructive germs
Which cling but loosely to thy fragile form.
From thence thou goest freely at thy will.
To mix familiarly with human life.
Where'er thy highly venomed feet do rest,
Infection for all mortal kind is sown.
Be it on food, in open wound or scratch,
Or on the lips of babies pure and sweet:
Contagion comes to life, and marks thy path
By sickness grave, by death untimely sent.

Thou paltry thing, yet, art thou always named
As chief distributer of deadly germs.
Thou fly pestiferous, thy race is run.
Avaunt, destructive enemy of man!
Thy breeding-spots by science are revealed,
And they shall serve no more thy purpose vile
For propagation of thy filthy spawn.

'Tis man's decree that thou must be destroyed
For all the varied ills which thou hast wrought.
An unrelenting, never-ending war
Is now declared, and fiercely shall be waged,
Till all thy kind is conquered, by Grim Death.

John M. Shaller.

Cincinnati, O.

"PENTECOSTAL" PARTURITION

Just had a novel experience. I was called a distance of six miles to a confinement case, a midwife being in attendance. However, I was kept for seven hours in an adjoining room, was asked for advice several times and gave two doses of remedies. Everything terminated normally,—but I came away without seeing either mother or son! (Religion, pentecostal).

George Mott.

Caxambas, Fla.

THE IDEAL ANTISEPTIC FOR THE COUNTRY SURGEON

I have not yet told you of my experience with chlorazene. I did not have an opportunity to test it out until along in July; that is, on anything worth while.

On July 11, a young man had the misfortune to get in the path of a charge of small shot, at about ten feet distance. It practically tore away the entire soleus on one leg. He came to me some five hours later, still bleeding quite profusely (which was fortunate) from the wound. The wound was about six inches in one diameter and about four in the other, the edges ragged and torn, by the shot, with a number of the pellets still in the wound.

I removed the shot, cut away the ragged tissue and applied a moist dressing of 1:1000 chlorazene on sterile gauze. From that time until I discharged him, there was not a single drop of pus, the wound smelled sweet and clean all through the healing process, and you could fairly see the granulations springing up. At present, the wound is entirely healed over with good firm skin tissue and the boy is as well as ever.

The next case was one of considerably more importance from a surgical standpoint. A boy, some twelve years of age, was duck hunting. His shotgun was resting on his instep, and in some way became discharged. The entire charge, wad and all, passed through his foot about two inches back of the toes, ranging rather forward. Under ether anesthesia, I discovered that every metatarsal bone except the first was practically destroyed and, where the charge emerged, the entire bottom of the foot was lacerated beyond repair.

I removed the second toes entirely, cut off and removed virtually all the metatarsal bones back to the tarsus and forward to the articulation with the toes; scraped away all the torn adherent flesh, removed the shot, sought out and removed the torn bits of felt wadding, put in a wick drain, and dressed the wound with moist chlorazene solution. That was three weeks ago, Sunday. Last Sunday, he got on a horse and rode several miles to see his grandparents. Today, he is getting ready to top beets. I will say that that is some record, taking into account the degree of traumatism.

The next case was one, where a fellow tangled up with a mowing machine and came out with a badly lacerated hand. There were, fortunately, no tendons severed nor any bones. I cleaned away the blood clots, washed the wound in chlorazene solution and put on a moist dressing of the same remedy. As he lived quite a distance away and was unable to visit my office as frequently as I desired, I gave the

patient a supply of the solution, instructing him how to manage the wound himself. In less than a week, he was back on the machine ready for another encounter.

I have made use of chlorazene a great deal in minor surgery, this fall, and in no instance has it failed in the slightest particular. I consider it the ideal dressing for the country surgeon's use.

CHARLES S. MOODY.

Menan, Idaho.

LETTERS FROM FRANCE—XVIII

While swarms of grumblers, eyes and arms raised to the sky, go about sighing and groaning about the material and moral ruin of France, is it not comforting to discern manifest and healthy signs of vitality and energy among the rising generation?

A professor at the Lyceum in one of the most aristocratic parts of Paris has asked 50 of his pupils aged between 14 and 15 two questions. The first was: "What profession do you intend to choose?"

In days that are not so very remote, children of that class never would have thought of growing into anything but Army officers, barristers, lawyers, doctors or, better still, Government officials. The scantily paid but much honored *rond-de-cuir* (leather office cushion, i. e., an official position) with its legion of honor and pension in old age, was the peaceful and cherished dream of most French boys or, rather, of their families. Business or going to the colonies was left to dunces or precocious blackguards. For a French family of the good old style, a business man, even if he turned into a millionaire of great importance, was looked down upon by his shabby but genteel relations as a sort of disgrace to the family pedigree.

Fortunately, French boys of the post-war period show more sense in their answers. While one of them only stands as candidate to a Government post, more than half are resolutely bent on becoming engineers, merchants, farmers or cattle-breeders in the colonies. And, among the latter, are the best pupils of the class.

To the second question, "If you had to give up school today what sort of manual labor would you turn to?" the same boys answered simply and enthusiastically:

"We can drive motorcars, clean them and do the repairs, fix electric lights, plough, mow or reap", and they all show delight and pride in their small store of technical knowledge. One of the best Latin scholars in the class boasts that he is quite ready to become a crossing-sweeper at 18 francs a day. None of them seems to feel the slightest shame at working with his hands. If the workman is trying his best to become middleclass, the young middleclass boy, on the contrary, will not be embarrassed if tomorrow's bolshevism requires him to become a mechanic. This is, indeed, a new France.

And, this grafting of the Anglo-Saxon spirit of initiative on the Latin intellectuality of the French may be one of the first happy results of this terrible war, and a beneficent compensation.

Americans can assume no small amount of credit for the spirit that animates new France. Many of these youngsters speak and write English and never tire of hearing the American soldiers tell stories of how, why, and when they do things in America.

—

M. Louis Martin, in a supplementary report made on behalf of the French Budget Commission, gives the following figures for the killed and missing, on November 11, 1918, of certain Allied countries and the corresponding percentages they represent of the countries' populations:

	Killed or missing	Proportion of population
France	1,398,515	1 in 27
Britain	869,000	1 in 57
Italy	494,000	1 in 78
Roumania	400,000	1 in 19*
Serbia	369,000	1 in 32
United States	114,000	1 in 1000
Belgium	44,000	1 in 150
Greece	12,000	1 in 400

*Not given in M. Martin's report.

The number of French wounded, the report states, was roughly 2,800,000, of whom half had been twice wounded, and over 100,000 three or more times.

Death's toll in the French army, it must not be forgotten, is still being exacted, although hostilities ceased on November 11, 1918. Thus, in the military hospitals alone, from the date of the armistice until June 1 last, 600 officers and 28,000 soldiers had died from their wounds or from disease.

These official figures, just issued, take no account of the deaths which occurred among those discharged as incurable or at

their own request. The experiences after the war of 1870 are still remembered in many families, and this war with its German refinements probably has left more dangerous complications than was the case 49 years ago.

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M. Klotz rendered a service both to France and the world at large in speaking so frankly yesterday on the existing economic situation and the outlook. He made no attempt to minimize the difficulties of the moment. On the contrary, he acknowledged them to be formidable. How could they be otherwise? France was for four years the chief battlefield of the most stupendous conflict in history. The French bore for four years the brunt of the war and put forth a greater effort and did more to win the victory than any of the other belligerents. But for the staunchness of the French troops and nation, but for their indomitable courage and dauntless spirit of self sacrifice, all the efforts of the Allies must have been in vain. All of France's Allies contributed to win the war, and, magnificiently so, but, it is France that made their help effective.

After such a gigantic and protracted effort, it would be strange, indeed, if the reaction were not greater in France than in other Allied countries. Two-thirds of the male population of military age were serving with the colors for more than four years. Ten of the richest departments of France were invaded and left a barren waste. All the resources of French industry were absorbed by the work of winning the war, and the State revenues were reduced. When these facts are borne in mind, the wonder is not, that the situation is so serious, but, that it is not hopelessly compromised.

Far from being compromised, though, the situation of France is such as to inspire and justify complete confidence. The national debt amounts, in round figures, to 30,000 millions, of which 27,000 millions are owing to America and Great Britain. On the opposite side of the ledger, is inscribed a considerable increase of national wealth and an enormous development of industrial equipment with, in addition, debts owing to France amounting to 52,000 millions of francs; namely, 12,000 millions lent to Allies during the war and more than 42,000 millions invested before 1914 in foreign securities, to say nothing of the indemnity due by Germany and acknowledged by her as a first lien on her resources Among other active factors that warrant confidence, must be instanced the steady increase of revenue from taxation and state monopolies, which produced in the first quarter of the present fiscal year three millions more than the budgetary estimations, while, in the second, the plus was 351 millions and, in the third, 450 millions. The estimations of revenue from these sources in the month of October, just closed, have been surpassed by 204 millions.

Still another inspiring factor is, the prosperity of the agricultural population. Mortgages to an enormous figure have been wiped off and the soil has passed into the ownership of those who till it. To round off this reassuring list, it is worth noting that deposits in the National savings bank, from January 1 to November 1 of the present year, surpassed withdrawals by the sum of 1,157 millions. The significance of those figures is brought out by the fact that, in 1909, the best year previous to the war, deposits exceeded withdrawals only by 95 millions.

M. Klotz was perfectly justified in asking American and British critics to reflect on this balance sheet. If the French system were so defective as is often hastily asserted, such results would have been unattainable. France is, as M. Klotz said aptly, in the position of a well organized and admirably equipped enterprise over which a cyclone has swept, necessitating rapid, difficult and costly reconstruction. French methods are not American or British methods but, they are not, on that account, less efficient. For more than fifteen centuries, they have made France the leading nation of the world; and they have enabled her to play a decisive and the most glorious part in the war.

The difficulties with which she is now struggling are the inevitable consequence of her huge share in the victory and not to defective methods. Of her male population of military age, 4,354,000 have been killed or permanently incapacitated, representing 30 percent. Is it reasonable to expect complete recovery from such a blow in a few months?

That France will recover, is certain; already she is recovering, as M. Klotz showed. We never doubted the final victory of France even in the darkest hours

of the war, and no reasonable being can doubt her ability to come triumphantly through this dark period of reconstruction.

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With the ever increasing cost of food stuffs, it becomes of prime importance to every householders to inform himself of the comparative sustaining values of different varieties of food to which he has become accustomed and for which he has cultivated a taste.

The fuel value of food is estimated by the caloric standard. A Gram equals 15½ grains. Now, 1 Gram of fat bacon has slightly more energy value than the same weight of butter and very much more than 1 Gram of lean beef. Bacon is, therefore, a more nutritive and economical food than lean beef and is really superior in food value to fat beef.

Oatmeal and cornmeal are of greater value than rice. Potatoes are about equal to lean beef in caloric value. A pound of dried peas contains over 1,400 calories and beef a little over 600. One pound of cheese yields about 1,300 calories, and the same weight of lean fish, such as cod, has only a little over 300 calories. Kippered herring, cheese, butter, beans or one of the maize preparations afford considerably better nutritive value in food than the same sum expended upon whiting, lean meat, garden vegetables, and fresh fruit.

In aiming at the purchase of the cheapest and most nutritive dies, it is well to know what one is buying. Sole, for example, is considerably more expensive than herring or haddock, while being much less nourishing. Even at the present time, it is possible to obtain varied and nourishing food at a moderate cost. But, it behooves the thrifty housekeeper to realize what she is buying. Costly food often is the least nutritive.

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There seems to be a mystery about the colds that are so prevalent in London and Paris at present. They refuse to be cured and, although at first it was stated that they were not influenza, doubts on the subjects are beginning to arise.

This is no ordinary cold. It has some of the characteristics of relapsing fever and, also, resembles malaria in the fact that it keeps on returning. You may be ill today, well tomorrow, and bad again the day after.

Four forms of influenza have been recognized—the respiratory which we had last year, the nervous form and gastrointestinal form, both common in 1889-91, and the febrile form. It is possible that our present outbreak of colds is the febrile form of influenza, which is markedly remittent having periods of abatement and exacerbation.

Most doctors would agree that the people are not in a state of as good health as before the war, chiefly because none of us are getting sufficient of the health-preserving vitamines present in milk, butter, fresh meat, vegetables and fruit.

In my opinion, the best remedy for the present epidemic would be, the despatch of a fleet of cargo vessels to Australia for the good meat, butter, cheese and wheat that abound there.

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The great success of vaccines in preventing typhoid fever and other diseases during the war has raised hopes that, in the course of time, we may be able to get more or less protection against the majority of infectious diseases.

At present, the most interesting development is the use of vaccines against colds, bronchitis, and other winter diseases. Inoculation for colds has been practiced for several years past, but, improved methods have greatly increased its efficacy. One of the most important of these is, detoxication, or removal of the poisons created by the germs of which the vaccine consists. A Scotchman, Dr. David Thomson, has the merit of devising the most successful mode of detoxication.

As a result of removing these poisons, very much larger doses can be given than formerly and no ill results are observed so that preventing or curing a cold now is only a matter of enduring a slight pin prick repeated two or three times an interval of about a week.

This now is the fashionable remedy. Vaccines act by provoking the body to produce certain protective substances. Protection lasts for varying periods in the case of different diseases, but, against colds it usually is effective for three months or longer. Even if, in some cases, the inoculation fails to prevent a cold, the attack will be milder and shorter.

B. Sherwood-Dunn.

Paris, France.

DOCTOR LOGAN'S LAST POEM

Dr. V. E. Lawrence, of Ottawa, Kansas, has sent us a poem, written by the late Dr.

John Presley Logan, of Ottawa, Kansas, who died on January 1st, aged 78 years. Doctor Lawrence speaks of Doctor Logan as being a cultured and honorable physician, with whom he was associated for many years. Doctor Logan had written many poems, and one of the last that he composed is the following, entitled "The Last Farewell":

Another friend has passed away
Another soul 's at rest,
In realms of everlasting peace,
Rejoicing with the blest.
A spirit loosed from earthly ties
Returns to him who gave;
To live a higher, nobler life,
A life beyond the grave.

We gaze upon a pale, cold face
That we shall see no more
'Till we have crossed the dark, cold stream
And reached the brighter shore.
And, while around this sleeping dust
Our tears of sorrow flow,
We wonder which of us shall be
The next one called to go.

Adieu, dear friend, thy course is run
Its joys and sorrows past;
Yet, thou shalt live in memory still
While our frail lives shall last.
With tearful eyes and heavy hearts
We lay thee in the tomb,
Where verdure soon shall clothe the soil
And flowers breathe perfume.

A CASE OF INFLUENZA WITH SERIOUS COMPLICATIONS

In writing this article, it is not my purpose to deal so much with influenza itself as with its complications. The case to be described was a very serious one and, under the ordinary procedure of care and treatment, even with a trained nurse in attendance, it could never have ended otherwise but in death. I wish to bring out the value of certain medicines used and, also, to show the need of special attention on the part of the attending physician to save life in cases of extreme illness. I will, therefore, give a somewhat detailed report of the case.

My patient was a man a little past the age of forty years, of medium size and with a fairly good constitution.

On my first visit, I found him with the usual influenzal symptoms, headache, general malaise, bronchial cough, some distress in stomach and bowels, temperature at 103½°, and sleepless. To relieve the stomach and bowels, I gave 2 tablets containing calomel, podophyllin and bilein, every half hour for three doses, and saline laxative two hours after the last dose of tablets; for the headache and general distress, acetylsalicylic acid, 5 grs. and quinine sulphate, 1 gr. every three hours; for the bronchial trouble, my cough mixture as printed in the December issue of CLINICAL MEDICINE, (1919 p. 854); a teaspoonful every two hours; for the fever, aconitine, glonoin and strychnine, 1 granule every hour. Glycerin paste was applied to the chest and one hyoscine-morphine (1/16 gr.)-cactoid tablet with caffeine and pilocarpine was given every hour or two for two or three doses, but, only at night in order to give needed sleep and rest.

General relief from all symptoms followed and in four or five days my patient was up.

During this attack of influenza, some middle-ear trouble developed, with a slight bloody discharge. For this, I gave calcium sulphide, ½ gr. every two hours; also, I applied, locally, powdered boracic acid and calendula, after cleansing the ears with a half-strength solution of hydrogen peroxide, warmed to body temperature. This was done night and morning, while the ears were kept covered with absorbent cotton and a bandage. I strictly cautioned the patient not to leave the house for several days after getting up, for fear of a relapse, as the weather was cold and chilly. I called on the patient once a day for two days to dress his ears, instructing his wife to attend to the subsequent daily dressings.

On the morning of the third day, after getting up from his bed, the patient came to my office, three and a half miles from his home, in an open buggy and with a cold March wind blowing, to have his ears treated, while, on the day before, he had been out trying to do chores.

The next day, I was called to his home and found him much worse than in the first attack. His temperature rose to 104½°. The bronchial trouble persisted and the ears were swelled shut with no discharge issuing from them. Severe headache and shooting pains through the ears were complained of. Some irritation of the brain caused slight delirium, at times with jerking of the upper and lower limbs, and an excitement to noisy demonstrations with fear of death.

Treatment was begun nearly the same as in the first attack, except that hot packs were applied to the ears, so as to overcome

inflammation, reduce the swelling and assist in relieving the pain which was, then, readily controlled by giving orally one tablet of hyoscine-morphine (¼ gr.)-cactoid followed by one tablet of the same combination (1/16-gr.-morphine strength) modified by the addition of caffeine and pilocarpine, every three hours to effect. Locally, as soon as the reduced swelling permitted, a gauze drainage, saturated with lysol solution (five drops to one-fourth glass of water) was applied well into the middle ear, two or three times daily, to hasten return of the discharge, which occurred in about eighteen hours and gave much relief to the patient.

The next day, my patient was doing quite well, but, fearing mastoid complication, I advised consultation with Dr. H., an eye and ear specialist from a neighboring town, which was granted. Dr. H. suggested, for the ear trouble, fluid-extract of echinacea, a teaspoonful internally every two or four hours, and the same applied locally to each ear on the well-inserted gauze drainage. In about a week, my patient was up again and feeling quite well, with a good appetite. His ears still were discharging though not giving any trouble. He was not permitted to leave the house, but, from overeating and, probably, from exposing himself to drafts from open doors, he had a second relapse. I was called again and found him in a rather critical condition with a return of the fever, which went up to 104½°, distended stomach and bowels, some irritation at the base of the brain, and an abscess on the anterior aspect of the left external auditory canal from which soon developed facial erysipelas that spread from ear to ear three times in succession.

Treatment was given as follows: Calomel, podophyllin and bilein, 2 tablets every half hour for four doses, saline laxative as before, warm-water enema in which were dissolved 40 grains of the sulphocarbolates of lime, sodium and zinc, this to be repeated every eight hours to the desired effect; the fluid extract of echinacea internally every two hours was continued; locally, tincture of iodine, full strength on the margin of the erysipelas eruption and half-strength solution on its surface, with gauze drainage for the left ear saturated with a weaker solution of the same, ten drops to half a glass of water, applied night and morning; granules containing aconitine, digitaline and strychnine, with pilocarpine gr. 1/64, one of each every hour till lowering of temperature, then every two hours. As a nurse had been secured at this time, I left my instructions with her.

The nurse having failed to attend to the bowel treatment, as directed, distention again resulted giving rise to convulsions. I was called again hurriedly and found my patient on the verge of convulsions which soon followed, one after another, with spinal retraction so strong that his body was raised off the bed and only the head and heels were touching it. This and the agonizing cry of the patient presented a frightful scene to witness. Some heroic treatment to control these convulsions had to be given, and, I believe I gave it.

It was about seven o'clock, p. m. when I began treatment as follows: First, hypodermically one hyoscine-morphine (¼ gr.)-cactoid tablet which soon controlled the convulsions for a time; second, administration of castor oil, one ounce every two hours to effect, and thoroughly clearing out the bowels with an antiseptic solution as before stated; third, hyoscyamine sulphate gr. 1/1000, strychnine arsenate gr. 1/128, one of each every two hours. To control the persistent convulsions, it was necessary to give the hyoscine-morphine tablets every two to two and one-half hours until noon the next day, when they gradually became lighter. These tablets were given only when symptoms of returning convulsions appeared and this was, as stated, above every two to two and one-half hours.

On the afternoon of the next day, I called in consultation Dr. K., from another town. At the time of Dr. K.'s arrival, my patient was resting fairly well. After examination of the patient, Dr. K. suggested the use of potassium bromide, 20 grains per rectum every four hours for the convulsions, should they return, and 40 grains of bicarbonate of sodium per rectum every six hours. My other part of treatment was continued. As my patient required special attention at this time, which only the attending physician could give, I decided to remain with him night and day, in hopes of saving his life. Continued watchfulness as to his varying needs seemed to demand my presence and his family as well as the nurse desired it. I, therefore, remained with the patient six days and nights, making calls to other

patients from his home. At the end of this time, he was out of danger and continued to get well.

Now, as to the treatment of the patient during the time I was with him. The night after Dr. K.'s visit in consultation, convulsions came on again but were readily controlled by the hyoscine-morphine, only two doses being required that night. The next day and night, only two lighter attacks occurred, both yielding to the same treatment, after which there were no further attacks. Bowel action was maintained with castor oil and enemas. Hyoscyamine and strychnine arsenate were continued, as well as the aconitine-digitalin-strychnine granules and pilocarpine, until the fever was gone. Calcium sulphide in ½-grain doses was given every three hours and the sulphocarbolates, 5 grains every four hours.

On the third day with my patient, I made my usual examination for any complications that might occur and found a dullness, on percussion, over the lower part of the right lung, associated with a slight tenderness. Previous to this, there had been no noticeable symptoms of this complication. I applied glycerin paste and hot packs over the affected part and gave my cough medicine every two hours, with the result that, in six or eight hours, the patient began to cough up pus and continued to do so for some twenty-four hours, when the lung was cleared up. For the erysipelas, I used nothing locally but the tincture of iodine as before mentioned. As the local treatment for the ears, with fluid extract of echinacea and tincture of iodine, did not control the discharges which continued about the same, I changed to chlorazene, half a tablet dissolved in one ounce of water to which I added one ounce of glycerin, making a 0.25% solution. This was applied to the ears on gauze drainage night and morning and, in three days, there was no further discharge from them.

For the convalescent period of this patient, I gave triple arsenates and a digestive formula. He recovered apparently fully, is as well as ever and very thankful that I stayed by him as I did.

G. A. Evenson.

Janesville, Iowa.

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[Doctor Evenson is to be congratulated upon the satisfactory termination of what must have been an extremely trying case. In view of the extension of the infection into the middle ear, and also on account of the beginning consolidation of lung tissue, the patient undoubtedly, or at least most probably, would have succumbed had he not received the continued personal care of his physician.

While we entertain a very high opinion of echinacea as a systemic antitoxic, we are inclined to believe that, in this particular instance, the drug was not the best one available for local application. Personally, we should prefer chlorazene solution or, better still, dichloramine-T in chlorocosane.

We are wondering why the free use of the hyoscine-morphine-cactoid combination —which was perfectly proper—was supplemented by hyoscyamine in comparatively full doses. Moreover, since sedation was called for, it seems to us, at that particular time, strychnine was not yet indicated, or, was it?

While we have voiced certain differences of opinion, we do not mean to infer that we are criticizing. Doctor Evenson's report shows that he knew perfectly well what he was doing and what he desired to accomplish. Undoubtedly, there were ample reasons for all the drugs that he employed and—the patient recovered, which, after all, is the conclusive test of treatment in a serious case of illness such as the Doctor had to deal with. The report certainly is a constructive one.—Ed.]

AUTOINTOXICATION—ITS TREATMENT

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In my practice of medicine extending over a period of thirty years, I have learned some things for myself that the books did not teach me. Namely: A certain cause may produce a variety of symptoms so different in their manifestations as to give rise to the view that they are so many different diseases, when in reality they are the result of one general cause. For example, faulty elimination of effete matter from the organism may give rise to those symptoms that accompany rheumatism, neuritis, epilepsy, biliousness, headache, nephritis, eczema, urticaria and many others that are known to result from autointoxication. Hence, any remedy that will remove the general underlying cause, often will do away with all these various symptoms. To illustrate my contention more clearly I

will detail some personal experience along this line of thought.

Four or five years ago, I was the victim of a severe attack of neuritis in my left shoulder and upper left arm. After waiting about six weeks for a spontaneous recovery, which I failed to realize, I tried the electric spark from a large-coil machine and, although the treatment was quite heroic and persisted in for a month, it brought me no relief. Then, I tried several remedies prescribed by physician friends, but, none of them did me any good. After suffering from the neuritis for nine months, I concluded that my trouble was due to autointoxication and I set myself to thinking up some remedy for it. Pretty soon, I formulated a prescription after this kind:

Creosote	drs. 2
Soluble iodine	drs. 2
Turpentine	drs. 1
Oil of cloves	drs. 1
Menthol	grs. 10
American oil	ozs. 16

Mix well by shaking and take one tablespoonful twice a day—night and morning.

This was followed, the first week, with a saline flush of the bowels each morning; after that, and during the remainder of the treatment, I flushed the bowels every alternate day. I also cut out the albumens largely from my diet, such as lean meat, eggs and cheese, rich pastries, further, pickles and highly seasoned articles of food. I drank about two quarts of water every twenty-four hours. Under this plan of treatment, I made a good recovery.

However, the neuritis was not my only trouble. I had a persistent chronic eczema, a very pallid complexion, frequent periodical attacks of intercostal neuralgia, attacks of palpitation. All of these affections cleared up in the general result of treatment for neuritis.

Now, when I have occasion to treat any of the above-named diseases or symptoms, I treat them with my remedy for autointoxication and get fine results. It is not an easy matter to get patients to carry out this treatment. There are too many details to observe and they complain that that it is too much trouble, that the medicine has a disagreeable taste and so forth. The medicine has a rather pungent taste and should be followed with a tumblerful of water. The formula is of my own devising, and, if anyone else has used even one like it, I am not aware of it. The drugs are eliminated by the bowels, kidneys, skin and lungs, meeting and antidoting all the toxins of the organism. Sometimes, when I go for several months without dieting properly, I feel some of the symptoms common to self-poisoning. Then, I resume the taking of the remedy and, in the course of a few days or a week, I am all right.

G. N. Murphy.

Paducah, Ky.

INTRAVENOUS MEDICATION

It is a well known fact that intravenous medication is a dangerous method of using drugs and, in my opinion, it should rarely or never be used. We should have a law holding physicians responsible for all harm done through intravenous medication as well as for all other dangerous form of treatment. Some methods of treatment should even be prevented by law, as, for instance, blood transfusion which is an experiment too dangerous to be used even on a useful animal, not to speak of a human being.

Only a few weeks ago, the *Journal of the American Medical Association* gave warning in regard to the common use of intravenous medication. Human life is too precious to experiment on with dangerous forms of "crackbrained" physicians. It appears that many physicians have actually quit the practice of medicine taking up, instead, experimenting and doing useless surgical operations.

I am a believer in legitimate surgery, but, I am opposed to those useless operations that are done for the money only, and I want to go on record as being opposed to them. The majority of young physicians that I come in contact with are anxious to specialize in surgery. When an operation is not needed, I would rather risk my life or that of any member of my family in the hands of a chiropractor than in those of a surgeon who writes F. A. C. S. after his name and can see no treatment in anything except surgery.

There is no wonder that drugless healers of various kinds are becoming so numerous and getting so much of the practice. The public is beginning to be aware of the fact that physicians, who depend upon medicine and surgery alone, often experiment with dangerous methods and do needless opera-

tions. The leading and local newspapers, a few years ago, attracted attention to, and made fun of, operations for appendicitis. One state legislature had a bill introduced making it a violation of law to remove an appendix unless it was diseased

The highgrade, class-A colleges are not turning out physicians but surgeons, eager to obtain the qualification of F. A. C. S., after a few years experiments on poor suffering humanity. The high standards of surgery (not, medicine), by the colleges and state boards, are bringing about a passing away of the country doctor and are taking medical treatment away from the people in sparsely settled districts. Even now, the time is at hand when many backwoods communities are all but deprived of medical attendants. The would-be surgeon rushes to the city to do high-priced operations.

Physicians used to graduate in from two to four months and were as successful as any of our four-year, class-A-college graduates at the present time. There are many successful physicians at the present time that were licensed under the old laws and have never taken a single course in medicine and whom I would rather have treat me than most of the present day recent class-A graduates.

There are various old women scattered over the country that never have seen a book on obstetrics and have no idea of what asepsis is, but who have been midwives for 20 to 50 years and have attended hundreds and even thousands of obstetric cases, with as small a percentage-mortality as the class-A graduates. Why is this? Because these women have not employed intravenous medication, blood transfusion, cesarean section and other dangerous technical experiments which the so-called up-to-date physician often employs.

We see much literature on animal vivisection, which is all right; only, it should go further. It should include protests against human vivisection, dangerous experimental treatment such as intravenous medication blood transfusion, useless operations and similar procedures.

Higher medical education is going to the extreme, the same as union laborers in their strikes. High medical education, like the labor unions, will sooner or later bankrupt itself. A man cannot be too highly educated in medicine if what he learns is true. But, at present, "higher medical education" is only a fashion and the fashion changes so often that a specialist in any one department can hardly keep up to date. As proof that "higher medical education" will not stand the test and is not scientific, I will mention the fact that a text book 3 to 5 years old is considered to be out of date; being revised every 3 to 4 years to bring it up to date, and, often, the author changes the entire subject. What is now up to date and called scientific will be out of date in 3 or 4 years for something that will possibly be less scientific, but at the time bear the stamp of being scientific.

Truth does not change. If a drug has a certain effect today, it will have it tomorrow or 100 years from now. The late Nicholas Senn, several years ago, delivered an address before the American Medical Association, on the abuse of surgery. The late Doctor Murphy emphasized the importance of internal medication and the need of emphasizing it more in place of surgery. Physical and mental methods have been neglected by most physicians until the country is full of various kinds of drugless healers who are doing extensive practice and who, in the course of time, will be doing practically all of it if things do not change.

JOHN A. BURNETT.

Crum Creek, Okla.

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[Doctor Burnett's philippic in criticism of intravenous medication and, even more, of the undue preference given to surgical procedures over purely medical methods of treatment, possesses the disadvantages peculiar to most expressions of opinion on the part of people who feel very strongly on a certain subject with which they are not in accord. While there is much truth in what Doctor Burnett says, he weakens the force of his argument by going to extremes in his arraignment.

Undoubtedly, there are many abuses in medical practice and it is granted without discussion that surgery has claimed and received an undue degree of superiority over purely medical practice. There is an entirely improper importance attributed to surgical treatment while there is a corresponding neglect of the "art of medicine" to which the physicians of old devoted so much patient and painstaking investigation and observation. Nevertheless, it can not

be denied that there is much that is really good in the modern trend of medical practice and that even surgery is innocent of many of the sins of omission and commission charged against it. The mere fact that young graduates are eager to specialize in surgery does not illustrate a general trend. It is, we believe, based upon a psychological truth and corresponds to the insistence with which, twenty years ago, young graduates rushed into gynecology.

There is, on the part of young graduates, a desire to "do something" and have some concrete tasks, the accomplishments of which will afford definite and tangible results. The work of the internist, in the treatment of "internal" disease, never possesses the spectacular and striking qualities that are presented by operative procedures. No matter with what care and ingenuity it may have been carried out, there always is an uncomfortable question as to whether the patient would not have done as well if a certain remedy had not been administered or if a certain mode of treatment had not been applied. The definite, indubitable proof frequently is wanting, and it is irksome to feel that the problems of medicinal and other modes of treatment on the part of the internist are not subject to mathematical calculations, even in the limited degree in which the advantages of surgical treatment can be calculated.

There is another phase of the question, though. Granting that surgeons go to extremes in their enthusiasm; admitting that the method of intravenous medication, very excellent in itself within proper limits, is made use of without sufficient critical guidance and precaution, and, admitting further, as we have done repeatedly in the past, that the custom of vivisection is subject to certain abuses that urgently need correction; acknowledging, in fact, that we go to extremes in many directions—is it not true that progress never would be recorded if we did not go to extremes? Progress is brought about especially by enthusiasts, and enthusiasts, it is well known, look at everything in the light of their own particular bias. Time invariably moderates and limit the extremes to which the progressive enthusiasts have gone and gradually the actual truth of new methods and procedures will be ascertained.

This applies equally to Doctor Burnett's sermon who, himself, is guilty of going to extremes in his arraignment of existing wrongs. It may be that the only way to remedy such wrongs is, to paint them in such lurid colors as to make them terrifying and highy objectionable. If that was the purpose of our correspondent, well and good. Nevertheless, it will be well to accept his statements with a grain of salt. While admitting that there is room for improvement, we can not agree with him in everything he says. Indeed, we are convinced that many of his charges are not justified.—Ed.]

THE IMPORTANCE OF BLOOD-PRESSURE OBSERVATION IN SURGICAL PROGNOSIS

Speaking before the Providence, R. I., Medical Association, Albert H. Miller, president of the American Association of Anesthetists, drew attention to the fact that the blood pressure is the most valuable single means at the disposal of the surgical team for making a preoperative prognosis and for judging the condition of the patient during and after operation. It may uncover arteriosclerosis, nephritis, myocarditis, aortic insufficiency, or mitral stenosis. It registers the ability to withstand hemorrhage, the depression of the anesthetic and surgical shock. Publishing his conclusions in the *Boston Medical and Surgical Journal*. 1919, Miller contends that, in the present advanced state of surgical knowledge, the patient has a right to expect a fairly exact preoperative diagnosis and a very exact preoperative prognosis. The surgeon who makes and records a prognosis before each operation and checks up his preoperative opinion with the result will rapidly gain in skill in this important department.

Miller classifies his cases into good, fair, and poor risks. Good risks are, patients free from organic disease, whose surgical condition is not likely to prove fatal; they are expected to recover. If a fatality occurs in this class of patients, the case should be carefully gone over to determine if the preoperative prognosis was in error or the work of the surgical team to blame for the fatality. In fair risks, that is, patients suffering from organic disease, but, whose surgical condition is not specially serious, if no examination and no prognosis has been made, the necessity for a lame explanation of a fatality, such as,

for instance, fatal diabetic coma after appendectomy, is most deplorable. In poor risks, or, patients whose surgical condition is so serious or so far advanced as likely to result fatally, recovery may be unlikely without operation, and the prospect of death should be anticipated by due warning.

In a series of 1,000 consecutive operations, studied under this classification, Miller found the following results:

	Class 1	Class 2	Class 3	Total
Cases	734	179	87	1000
Deaths	2	14	29	45
Percentage	0.27	7.82	33.33	4.5

The deaths recorded occurred in from 24 hours to 3 weeks after operation. No deaths took place during or immediately following the operation. Measured doses of anesthetics exclusively were used by Miller.

To determine the accuracy of Moots' rule; namely, that, if the pressure ratio (representing the relationship existing between the kinetic energy expended by the cardiac contraction in moving the blood column and the potential energy stored in the arterial walls and columns of blood which they contain), lies between 25 and 75 percent, the case probably is operable, if outside these limits, probably inoperable, Miller investigated his series of 1,000 cases and tabulated the results. Viewed in accordance with Moots' rule, 3.23 percent of the operable cases died and 96.77 percent recovered. Of the inoperable cases, 23.07 percent died and 76.93 percent recovered. Some of the cases classed as inoperable underwent minor operations safely, and some of those classed as operable died after very serious operations and under circumstances that could not have been readily predicted. On an average, Miller believes that his results show the great value of Moots' rule in surgical prognosis.

McKesson's rule, that, after a half-hour of sustained low blood pressure and rapid pulse, almost every patient succumbs either shortly or within three days to surgical shock and heart exhaustion, was put to a similar test. In a considerable number of cases, shock (characterized by a diastolic pressure of 80 mm. or less, a pulse pressure of 20 mm. or less and a pulse rate of 120 or more), was reported by Miller to his surgeons and the operation rapidly completed. All of these patients recovered. Thirteen of the patients were in the danger zone for from 25 to 70 minutes. Of these, 9 died, giving a mortality rate of 60.23 percent. These figures certainly indictate the great value of McKesson's rule for determining shock during operation.

According to Miller's conclusions, both rules are trustworthy and valuable aids and should be employed as a matter of routine.

F. H. McMechan.

Avon Lake, Ohio.

VOMITING OF PREGNANCY

The article by Dr. C. S. Cope, entitled "A Chiropractor," published in the January number of Clinical Medicine, is very interesting. If he has never tried this treatment in the nausea of pregnancy, I wish he would do so and report through Clinical Medicine. I have used percussion and deep massage along the cervical vertebræ for this condition and, with good results. So far as I know, the idea was original with me.

C. W. Hunt.

Brevard, N. C.

LOCAL VERSUS GENERAL ANESTHESIA

So much literature has come to our notice, recently, of local versus general anesthesia, that I think it would not be amiss at this time to analyze the advantages and disadvantages of both methods over one another and try to place them, or limit them, as the case may be, to their respective fields. In doing this, we shall be serving a twofold purpose; on the one hand, to the surgeon in overcoming the confusion that now exists in his mind as to which method to choose, on the other, to the patient, eliminating painful procedures when local anesthesia is not advisable, or unnecessary etherization when general narcosis is not justifiable.

Dr. Farr advised in a recent article that almost every operation, with very few exceptions, be performed under local infiltration. Other men have favored its use in a very limited field of minor surgery or in exceptional cases where ether or the combinations are contraindicated.

During the past four years, I have personally performed over one thousand

(1,000) major operations under local infiltration, including thyroidectomies, herniotomies (inguinal and femoral), appendectomies (interval and acute), suprapubic cystotomies, rib resections, amputations (Biers' method), cholecystostomy, supravaginal hysterectomies and abdominal explorations. During this period, I have tried to preserve an open mind toward anesthesia in order not to prejudice myself with either local or general anesthesia.

The result has been, that, now, I limit local anesthesia as a routine measure to two major procedures namely, thyroidectomy and herniotomy. These two operations have been uniformly successful in my hands under local anesthesia. By successful, I mean that they can be performed thoroughly and painlessly under local infiltration. From this, one would infer that the other operations were not successful yet, this was not entirely the case. Many of the other patients did not complain of any pain, some did. In others, we did not get good relaxation; in others we could not maintain good exposure because of resistance on the part of the patient, and this was especially true in operations upon the upper abdomen and existed from the very beginning of the procedure. Whenever a walling-off pad had to be used, there always was the sickening sensation of pulling on the intestines. The interval appendectomies were painless but the readjustment of the bands and membranes, when encountered, was not satisfactory; inflammatory cases never were satisfactory, as we could not secure complete analgesia and we always had a fear of spreading the infection. This also holds good in the case of cancerous tissues. Therefore, to summarize:

I recommend local anesthesia in thyroidectomy and inguinal herniotomy, aside from minor procedures, because, in these two procedures, local anesthesia has distinct advantages by maintaining normal blood pressure and lessening the work thrown upon the kidneys in the former and freedom from postoperative vomiting with the forcing or breaking of sutures and tearing of tissues in the latter.

I can not see where local anesthesia has any advantages over general anesthesia in the remainder of major surgery, with the possible exception of poor risks. I do not believe that it lessens postoperative pneumonia. In my experience, this occurs in drainage cases where for some reason or other drainage has become impaired. That local anesthesia lessens the mortality, is not appreciable. In my opinion, the advantages of general anesthesia overbalance the advantages of local anesthesia in major surgery with the exception of the two procedures mentioned.

* * * *

The following suggestions were received from a patient recently operated on for goitre, to comfort the patients operated under local anesthesia:

"1.—Music. A little jazz, while the patient is being conveyed in state to the portal of the operating room, so that she may be reassured it isn't her funeral that is about to take place. In the operating room, a few harps might serve to soothe the nerves of all concerned. *N'est-ce pas?* Of course, doctors' objection to this would be, the difficulty of sterilizing the music.

2. Another reassuring factor would be, a general reception in honor of the patient, on his arrival in the operating room. Nothing can equal the hearty (?) handshakings and stereotyped greetings of the modern "receiving line" (?).

3. It is earnestly recommended that surgeon and assistants, in speaking of the details of their work, use the Chinese language or the best Chicago slang (providing the patient does not hail from that city), because it often happens that the patient's mind is fully alert and the imagination gains control over the will power, thus causing a slight (?) nervousness. This applies especially to goitre subjects, as my data have been gathered chiefly from such sources.

4. I hesitate to allude to the following, but, in the interest of our suffering brethren, I make bold to do so. The chief surgeon, in order to reassure the patient (and, I believe, to steady his own nerves) repeatedly tells the patient now, that it will be only "a minute" until it is all over, and the minute stretches to almost an hour, much to the disappointment of the sufferer who has, hitherto, trusted implicitly in the surgeon's word. I humbly suggest that he *wait* until the last moment before uttering the consoling words.

5. I hope I shall not be misunderstood when I say that it is very desirable to have a twinkling, blue-eyed, sympathetic assistant who performs some arduous duty in front of the "fence" and who keeps a lookout as to how the patient is with-

standing the ordeal. I found it comforting indeed in my own case. *Oui, Oui!*

6. It always is well to keep the patient in ignorance of any audience (outside of relatives and friends) who may wish to view the bloody spectacle, "in the interest of science," and, above all, insist on said audience keeping on their own side of the "fence", so that the patient may be free to make any facial contortions she pleases; otherwise one would become self-conscious and ill at ease.

"One Who Has Been There."

RED CROSS NOTES*

A report dealing with the work of the Allied Antityphus Train, which has been operating in Siberia under American Red Cross direction for the last six months, was made public at Red Cross Headquarters recently. After covering thousands of miles and caring for thousands of victims of the disease, the train, known throughout Siberia as "The Great White Train," arrived at Perm where the doctors and nurses are combating an outbreak of typhus among the soldiers and civilians of that district. Captain Rudolph Bukeley, a member of Honolulu chapter of the Red Cross, is the director of the expedition.

The reputation of the train as an effective weapon in fighting typhus has spread far and wide. Built by the American Red Cross for the Allies, it was originally intended to be used first in the maritime provinces of Siberia. Then came the tremendous epidemics of typhus out west, in the heart of winter; epidemics that ran the number of hospital cases up into the tens of thousands and the unreported cases into the twenties of thousands. From military camp and concentration point; from soldier and prison barracks; from hospitals and orphanages and refugee colonies; from railroad trains crowded with homeless people and stations even more crowded, came reports of the spread of the "spotted fever".

So, the Great White Train went west, long cars for bathing men, women, and children that had been unwashed for months; cars for cutting the hair and sterilizing the clothes; cars laden with medicaments and clothing; and began its work of aid and mercy, and the prevention of even worse epidemics.

There is ample testimony as to the good work accomplished by the expedition, some of it from businesslike officials who were, in the beginning, if not skeptical, at least unconvinced that the train would be a success. When typhus began to die down with the coming of summer, and the train was taken to Omsk with its supplies all distributed, the question arose as to its disposition. General Knox, head of the British Military Mission, who has seen the train and knows of its operations, telegraphed to Vladivostok. "The train has done grand work," he wired, "it must not be scrapped."

On the Road for Months.—The train left Vladivostok on February 2, and since then has been continuously engaged in its relief work. The director was Captain F. A. Dallyn of the Canadian Expedition Force, a sanitarian of long experience. On April 2, Dallyn went down with typhus fever, from the bite of a louse received while he was cutting the hair of a patient. His escape from death was narrow, but, Red Cross doctors and nurses pulled him through and he is now at Vladivostok, convalescent.

With Captain Bukeley in charge, the train went steadily on with its work, though, in a few days, it was apparent that it had an epidemic of its own. The typhus broke out among the attendants. One after another was taken ill and sent to Petropavlosk, a short distance away, where the American Red Cross maintains a big typhus hospital which has done notable work.

Bathing hundreds of men daily, sterilizing their clothing, giving out medicines and garments, the train visited city after city. Its trail of mercy reached from Vladivostok on the east to Chelyabinsk on the west, 4,125 miles.

Fourteen of its personnel of 31 had been stricken with typhus. Eight attendants out of the original eight fell victims. A Czech guard, a car porter, a male "feldscher", or nursing attendant, and an assistant feldscher were taken down. Typhus even went into the crew of firemen looking after the waterheating apparatus. But, the train went on. Men were employed to take the places of those sent to the hospitals. According to last reports, all of the patients were recovering. Diag-

*This letter was written last July. It possesses, still, great interest, in view of the fact that the work of the American Red Cross, in far-off countries, by no means, is finished.—Ed.

The Great White Train

nosis of the disease at an early stage, prompt dispatch to the hospital, and careful nursing pulled them through. Their recovery shows that typhus, fought with modern weapons and plenty of them, is no invincible enemy. It can be defeated in Siberia, though the great epidemic of 1919 seemed overwhelming.

About 20,000 men have been handled by the personnel in the six months the train has been out. These men have been bathed, their heads clipped, their clothes disinfected, and in many cases they have received underwear and needed medical treatment.

From February 24 to May 10, the train handled typhus-ridden crowds of civilians and soldiers at Novonicolaivsk, Taiga, Tomsk, Bolotnairya, Omsk, Petropavlovsk, Kurgan, Chelyabinsk, Troitsk, Urgomish, and Mishkino. The largest number handled in any one day was 999. A slight mistake in calculation spoiled the 1,000-record which the train crew had determined to establish. Captain Bukeley says that, if it were possible to keep the men moving into and out of the cars for 24 hours consecutively, it would be well within the capacity of the train to handle as many as 2,000 cases in that time.

Cooperating with Russian Officials.— Side by side with the purely physical aspect of the antityphus expedition, that of train-operation, went the work of education. In every city or town visited, the train officers arranged conferences with the leading officials, military and civilian, of the district who were in charge of sanitary, medical or surgical work, and placed the Red Cross facilities at their disposal. Where danger to Allied troops was involved by reason of typhus which might get into the Allied camps, it was the Allies, through this train, who placed their unique weapon at the disposal of Russian Communities.

On arriving at a Russian town believed to be typhus-ridden (there were few indeed free of the disease) a meeting of the various local officials was arranged and the typhus-train officers secured all possible information concerning health conditions of the district. Simultaneously physicians aboard the train were sent out to make separate examinations as to the needs of the several hospitals. Expert plumbers

and engineers from the train also were sent out, to examine bath-houses and the disinfecting apparatuses used by the Russians. In every city and town, there was compiled authentic information on which the Red Cross can base future operations against typhus.

For instance, many towns were found very inadequately supplied with sterilization apparatus. The Red Cross has determined to meet this need, by next winter, through the construction of at least 200 sheetiron sterilizers of a familiar Russian pattern which has proved simple to operate and effective in disinfecting clothing. For the towns, also, where drug supplies were particularly low, the Red Cross has accurate information on which to base autumn and winter distribution.

The educational results of the antityphus expedition, were far-reaching. The very appearance of the great white train, in railroad yards and at stations where thousands of people congregated, proclaimed to the Russians that something new, interesting, and helpful, was afoot. Military and civil officials were deeply interested in the train and its operations.

At the conferences between the Red Cross men and the local authorities, plans were outlined and suggestions made for local campaigns to combat typhus and kindred epidemics, campaigns in which the Russians now have the help of the American Red Cross.

Care of the Soldiers.—The danger to Siberia, of the overcrowding of military concentration areas, with inadequate sanitary arrangements, was determined beyond question by the investigations of the antityphus campaigners. Unquestionably, one of the most potent reasons for the rapid spread of typhus during the winter of 1918-19 was, that troops suffering from the disease came back to "clean" areas and infected their vicinity.

One of the principal points made by the Red Cross men, after they had investigated conditions in the west, was, that, to control typhus, it is necessary to have a thoroughgoing organization in western Siberia which shall examine all trains, bathe and disinfect troops and groups of prisoners frequently, and absolutely forbid infected bodies of men from going into clean areas.

During the summer, there will be comparatively little typhus, in the opinion of Red Cross workers; but, next winter they look for a recurrence of the disease. It is altogether improbable that the acute overcrowding of stations, trains and all public buildings, due to the hordes of refugees, will be done away with before next winter. They are living now largely in the open, but, as the chill of the Arctic comes down on the first winds of winter, they will, of necessity, leave their huts and shacks which abound in the outskirts of all Siberian cities, and will once more hunt for warmer quarters.

Then, too, there is no assurance that the war of Omsk government troops against Bolsheviks will be over by the winter of 1919. There still may be hundreds of thousands of men on the western front and, during the winter, there is no way of avoiding the crowded barracks and troop trains.

So far as the troops are concerned, however, there will be better facilities and equipment next winter to care for them. One of the greatest shortages has been, the lack of underclothes. Soldiers with but a single suit of underclothes, each, have small chance to keep themselves clean and free from the cootie. And, there were tens of thousands of such soldiers on the western front during the winter and spring. There were tens of thousands with no change of uniform. Disinfection equipment was terribly meager. Every condition made for spread of the disease.

Though the Russian army probably will be better equipped to fight typhus, the civilian population is well-nigh helpless in the face of economic famine of Siberia. There has been a comparatively negligible supply of new clothing sent into this huge country. The American Red Cross sends westward trainload after trainload of relief goods—suiting, underclothing, sweaters, socks—but the sum is inadequate in the face of the staggering necessities. Yet, every garment counts, every sweater knit by some devoted woman or girl in far-off America may save a life this winter.

Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, A. M., M. D.

The Actual and the Ideal

[*Concluded from February issue, page 136*]

BUT, as I have already said—though generalities are well enough in their place—but, we must have concrete facts in order that the principles may be made perfectly plain. Therefore, let us consider an actual case, that of a young man of high ideals starting out into the world. Let us call him Howard.

When Howard was nineteen years of age, he took a position as bookkeeper in a wholesale commission-house that dealt mostly in butter, eggs, and cheese. At the end of his first month, his employer, whom we will call Mr. Duncan, informed him that he would initiate him in the firm's method of making out statements and sending them to the clients who placed their products in their hands for sale. The first account was that of a farmer who had sent the firm five tubs of butter to dispose of, and this had all been sold at thirty-two cents a pound. Mr. Duncan, however, in reading off the transaction, put the price at twenty-eight cents.

"Excuse me," said Howard, with the books before him, "you mean thirty-two cents. Here it is on the daybook."

"Why," says Mr. Duican, lifting his brows, "that is the price we got for it, of course, but, we shall credit him with only twenty-eight cents. That is the rule, everybody does it, it is the custom of the trade. Put down twenty-eight cents."

This seemed to be dishonest to young and enthusiastic Howard. The argument with this farmer was, that the butter should be sold for all it would bring in the market and the firm was to take, as its commission for handling it, a percentage of the selling price. What did this reduction of four cents a pound on the real transaction mean? He thought a moment, tapping the desk with his pen. He was no prude, no "goody-goody" boy, but, his pride was wounded. He felt that he was too big to take such an advantage of this poor farmer who, with his wife and daughters and sons, was doubtless, having a hard time of it to make both ends meet, to say nothing of lacking the luxuries which this trader enjoyed on the profits he was making from the clients who trusted him. However, Mr. Duncan was looking at him, an irritable scowl on his forehead, and the boy put down the amount as commanded. He not only put down that amount, but, he continued for three hours to put down amounts in the same class, and by noontime he had defrauded, by methods which he was assured were strictly up to date in business, forty-two people of from 2 to 4 cents on each pound of butter they had sent in, and varied the operation by carrying the same principle into the egg-account and cheese-account. Then he went to lunch and there figured up, roughly, the legitimate and illegitimate profits of the morning's procedure, with the result that $378.00 stood out there on the paper as a clear steal in his eyes.

His first thought then was, to go back to the office, take from the drawer the salary that was due him, grin in Duncan's face, and depart with his office-coat under his arm. Then he thought of the family at home, the mother and younger brother and grandfather who were dependent principally upon him for the very food that went into their mouths, and decided that he would get another job before leaving this one. It did not even remotely occur to him that he would have any difficulty in finding employment in some concern that did a legitimate business or a business that he would consider legitimate. He regarded this man Duncan as an abnormality, a footpad on the byways of trade, who deserved only contempt, though he must be aided and abetted in his contemptible profession, because he held the keys to his, Howard's, family larder. But, only until a decent situation should be found! He, therefore,

remained with the house three months, long enough to start a well-defined line of cynicism running down beside his idealist's nose, and then changed to a retail clothing-house. Here, he kept the books and was expected to wait upon customers when the day was busy.

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He had been in his new position three days when, all the salesmen being busy, he was called to wait upon a man, whose first words were: "I want to look at a suit, a good one—no flocks, now, mind you—I want a suit that is all wool."

Now, this new young man had heard his employer say only that forenoon that there wasn't a really all wool piece of goods in the store, and, so he answered with: "We have no all-wool suits; they all have more or less shoddy or cotton in them."

Whereupon two astounded pair of eyes were suddenly turned upon him, one pair belonging to the customer, to whom such frankness doubtless was refreshing to the last degree, the other pair belonging to the proprietor, who stood near by, and who immediately said to the prospective customer: "What were you looking for, sir? This young man is new here and knows nothing about the goods whatever. It is his first week in the store. The suits are over this way."

The customer, however, with a wide grin at the embarrassed Howard, shook his head and went out.

"You unspeakable idiot!" the proprietor hissed at Howard. "What do you mean by driving customers out of my store in that way! Why, you don't know the first principles of the trade, you're a piker. Here, take your pay and get out of here!" With that, he threw the few dollars due Howard on a pile of clothing and walked away, red-faced with disgust and anger. Afterwards, Howard learned from him that the first principles of trade consist in getting the customer's money, then shooing him out of the store.

Still, Howard did not believe this, and tried again, this time as a wharfinger's clerk on the water-front. In this position, he had his own accounts to keep, making out all the bills and collecting the money himself, so that, so far as he was concerned, the business of the office could be conducted in a legitimate manner. Yet, this did not prevent him from seeing men do a hundred things that made him ashamed of belonging in the ranks of humanity. In the storehouse, one man was kept busy much of the time in altering, with brush and stencil, the brands on the barrels of flour, another watered the cider, a third, seemingly finding the government gauger's work on the molasses to be wrong, changed the figures; and, weighing himself on the scales, Howard found that he had unaccountably and most astonishingly gained five pounds in one night. Captains of vessels constantly came to him with offers to "make it right" with him if he would be conveniently absent at such a time from the office, so that the captain whose vessel had the right of way to the discharging landing would be unable to find him, giving the next one behind the opportunity to pirate his way in, discharge and warp away while the search for him was being prosecuted. Never accepting any of these overtures to a friendly understanding, he soon lost popularity with the wharf's customers, and his position was not long in following.

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In the meantime, Howard had been studying the history and secrets of literature, and now he turned to this, sure that here, at all events, there was rectitude and decency—for, where was there any opportunity for anything else! Moreover, literary people, he was certain, stood high above these petty pilferings, and they and their trade must be sane and wise and pure even though no other in the whole world should prove to be.

Not to dwell too long upon this concrete example of the difficulties in the way of a poor youth with ideals, and to make a long story short, I may say that the young man found as many abuses in literature, at the selling end of it, as he had found everywhere else. The writers themselves, in many, many cases, were far from sincere. Nevertheless, he had learned by this time that what others did need not affect him if only he could become strong enough to remain above and independent of them: and to this object he now devoted himself. It cost him years, and friends and opportunities, and misunderstanding that was more bitter than death, but, he persisted, because he knew he was right and would succeed; and he knew, moreover, that he would be called upon to endure as much,

though the trials would be of a different nature, even if he had weakened and dropped to the level of all that surrounded him. And in that case he would have been obliged to endure longer, in fact, would be compelled to endure all his life, as so many other blind strugglers were doing, while he was positively certain in his own mind that his loyal adherence to sincerity would eventually raise him to the enjoyment of all that the world can give.

There we must leave our young friend. He is not dead yet, neither has he attained all he hoped for, but, his courage is good and, in order to make sure of his goal, he imagines himself every day as having already reached it, thus transmuting, by very force of character, the actual into the ideal. At all events, he feels that he can hold up his head in the light of day, secure and impregnable in the belief that, whatever may come to him outwardly, whatever his position in the eyes of men, he is living the life of a man, and not merely that of a ravening animal.

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A point of illumination here consists in the fact that this man is not regarded by his neighbors as being any different from themselves; at least they do not consider him any more spiritual than they are, although they admit his learning and respect it. But, they have no idea that he is swayed in all that he does by adherence to truth, whatever may be the cost, that he is living for ideas as contradistinguished from material gain, and that every day he knows delights superior to those of which they fondly dream as possible only in some dimly imagined beatific future. Only his most intimate friends have any idea of the *difference* of his life, of the ideality of it, and only they see in his attitude anything worth emulating.

If this be so in this case, if this man can go his way unknown in the crowd, regarded by men as a materialistic struggler like themselves, with no more light than they have, with no more happiness, with no more solid hold upon the verities, how can we say that the world is not full of just such people as he who, all unknown to us, though we see them every day, have "started a branch establishment of heaven and are running it here on earth"?

We know now that Spinoza was a man of this kind, albeit it was never suspected until he was dead—in fact, he was looked upon, while he was living, as one of the worst characters that ever cumbered the earth. Read his excommunication from his church. Could any but the vilest of inhuman monsters ever have deserved such language? Yet, now we know that at the very moment when he was being judged in this manner he was living a life so pure, so wise, so near to the standard of Jesus Christ that it is certain that no better man ever walked beneath the dome of heaven. Then there is the case of Walt Whitman. In his lifetime, he was believed on all sides to be wicked, brutal, a sensualist steeped in obscenity and desire, to the stupefaction of all the spiritual possibilities of his lost soul, while now his is regarded as one of the loftiest, if not the loftiest, of voices that the nineteenth century produced! Emerson was regarded by his neighbors as insane, cold, an aristocrat, a would-be philosopher, a man without affection or any human sympathy, who denied the immortality of the soul and would violently wrest away from sorrowing humanity the only hope left to it, that of a future state: now, he is looked upon as having stood for all that is highest in the mind of man—the "sweetest, sanest, lovingest, most loyal soul the ever with sure finger pointed the way from earth to heaven".

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Everybody knows that such examples of contemporary blindness may be multiplied in the history of humanity almost indefinitely. The question is, "Why? What beam is it, what imp of the perverse, that sits malevolently in the eye if mankind and so distorts and hinders its vision that the very elect of God, now as always, appear as devils and monsters?"

The answer is simple. Selfishness, the desire for material returns instead of truth; actuality instead of ideality, show in place of reality; these are the standards by which we judge our contemporaries. Though we delude ourselves with the notion that it is character that we demand in our neighbors, it is, really, reputation that we desire, both in them and in ourselves, mistaking this for character; and thus it becomes an absolute impossibility for us to see anything as it really is in the abstract.

All our values are false, as if a man who is color-blind were called upon to paint our walls and choose our furniture and

pictures. Nothing but chaos could result from such a choice. The "smart" man seems admirable, the idealist seems impotent, even thought it is the former who subtly picks our pockets, shielded behind the cloak of trade, and the latter heads the very van of the army that is successfully fighting for that peace and content and delight for which we so longingly yearn, yet without much hope. The former wishes himself well, the latter wishes us well; but, our standards have taught us to beware of the man who pretends to wish to do something for us: he always "has something up his sleeve!" We admire the smart man, because he comes right out openly and acknowledges that he is for himself, without any puling pretense of benefit to others, under cover of which he may work for his own ends.

A certain quality of admiration inheres in frankness, and nothing appears really frank to our distorted vision unless it contains an admission of the self-seeking that, as our education has taught us, lies at the bottom of all human action. We have learned honestly to believe that the person who tries to make us think that he wishes to benefit us is not frank, for, it is and must be himself whom he wishes to benefit. We believe that we have found this to be the case invariably with all men. And perhaps we are right! But, if so, it behooves us to make new acquaintances, for, hitherto we have been moving among beasts, and not among men. There are men, and it is men whom we should cultivate if we would become men ourselves.

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It is, however, of quite secondary importance to the real idealist whether he is judged correctly or incorrectly. He is living for truth, not for opinion; for wisdom, not for things; and this constitutes for him an impregnable position, from which not all the forces of earth could jostle him. Even his equilibrium there can not be disturbed, except in such measure as he may vary from his ideal, yielding, as he sometimes must—being merely human—to the mighty influences brought to bear upon him. For, the irony of his position is, and ever must be, that, fighting with all his mind and being for the enlightenment and advancement of the world, he bounds so far in the van of his followers that they mistake him for an enemy in flight and put forth all their energies to overtake, drag down, and annihilate him. Well is it for him, then, that he knows his only salvation is, to keep straight ahead, never looking backward, that, to stop to argue his friendship for the mob that he is attempting to save, would be useless, that only deeds count with men in mass. By and by, when he is dead, the world that he loved despite its hate of him will, perhaps, if its eyes become opened, erect a monument to their goodlike hero who for so long lingered among men successfully disguised as a commonplace mortal.

But whether or not recognition ever comes to him, is a matter of little import to him now. His strife is waged for the Ideal, which is the Real, and to it is subordinated all else, whether of fame, wealth, position, all that would make him great in the eyes of others and so small in his own estimation—and herein lies his strength.

A man who believes that he has nothing that can be taken away from him, who has no desire for *things* more in quantity than will suffice to afford him a modest living, who prefers the taste of clear water above that of the rarest wine, who can find more delight in the affectionate smile of his friends than he can in the plaudits of emotion-stirred and temporary enthusiasts and understands the difference between working for love of work and laboring for a living—this man, of all the types of heroes and saints that have come down to us in the pages of romance or history, alone is free. He not only is free, but, he is a giant in strength, though his physique be feeble and his influence among men a mere negation.

The doer is but the hand, the hand that obeys the unseen mind; and this unseen mind is that of the flower of humanity, the idealist, the man who gladly permits all the glory of the achievement, whatever it may be, to descend upon the hand that apparently wrought it, content in his own estimation to see the thing accomplished, the ideal brought into expression. His reward is in the thinking, and it is a reward so loftily superior to all other earthly need that only a mind like his can see that it is a reward at all; however, him it fills with ecstasy, for, through it, he proves his ability to *create*, thus establishing a close and undeniable and power-conferring relation to the functions of the First Great Cause Itself.

Among the Books

WILSON AND CARROLL: "THE NERVOUS HEART"

The Nervous Heart, its nature, causation, prognosis and treatment. By R. M. Wilson, Captain, R. A. M. C., and John H. Carroll, Major, M. C., U. S. A. London: Oxford University Press. 1919. Price $2.50.

This book is an attempt to consider the problems of heart disease from a new point of view, that of the nervous system. If a profound disturbance of the nervous control of the heart exists, the heart muscle will, on this account, work at a disadvantage. Its position will correspond to that of a motor engine when the control and timing are out of order. The engine will not be able to develop its powers and great strain will be put upon it.

The authors have definitely established the fact that several diseases act directly on the vagus-depressor mechanism increasing its irritability. Such are, for instance, trench fever, rheumatism, rheumatoid arthritis and a few other conditions. The exact nature of the toxin is not known.

The treatment of functional heart disease falls into two divisions: (1) the treatment of the infection causing the disease, (2) palliative treatment. Until some way can be found to combat the infections, which are the exciting cause, all that is left to the physician are, palliative measures. The first duty of the physician will be, to relieve his patient of depressing circumstances, that is to say, of external and mental factors tending to increase vagus-depressor irritability. Disabuse the mind of the patient of the idea that his heart is diseased, and as a general rule, this can only be done, by affording him a rational explanation of his symptoms. Advise him, that there is no danger in effort; the danger lies in rest. An arm kept in a sling wastes; and the same applies to the heart.

The best tonic in functional heart disease is, thyroid extract. The best dose is 1 grain daily to begin with, but, this may be increased to 8 or 10 grains daily, in accordance with the needs of the individual case. Marked slowing has been the rule in cases of tachycardia.

WEBB-JOHNSON: "TYPHOID AND PARATYPHOID FEVERS"

Surgical Aspects of Typhoid and Paratyphoid Fevers. By A. E. Webb-Johnson, D. S. O., M. D. Temporary Colonel, Army Medical Service; Consulting Surgeon, British Expeditionary Forces in France. London: Oxford University Press. 1919. Price $4.00.

The author's object in publishing this monograph is best given in his own words. He makes mention of the work of Professor W. W. Keen on "The Surgical Complications and Sequels of Typhoid Fever," (W. B. Saunders Company, 1898). In his preface, he goes on to say that, even twenty years after the publication of this book, all that was called for was a consideration of new problems, a review of advances in our knowledge with an outline of our present conception of these fevers, their complications and sequels and a description of modern surgical practice with regard to them.

The carrier problem is one of immense importance not only to the army but to the community at large. In a large number of patients, apparently cured, there persists a focus of infection, somewhere in their system, that makes them a source of danger to their neighbors. In the biliary tract a chronic cholecystitis with or without gallstones may result. In the urinary tract, a chronic cholecystitis with or with-There may be foci of vegetations of the bacilli in the bladder, in the renal pelvis or in the various ducts and recesses opening into the urethra. The bacilli causing typhoid may be found in the bone-marrow during the disease and as long as four months after recovery.

This is a very valuable book, both to the army surgeon and the general practi-

tioner, in those communities where typhoid fever is a disease that always must be reckoned with. To any physician who desires to become acquainted with the numerous sequelæ and surgical aspects of typhoid fever, this volume is cordially recommended.

MARR: "PSYCHOSES OF THE WAR"

Psychoses of the War, including neurasthenia and shell shock. By H. C. Marr, Lt.-Col., R. A. M. C. (Temp.) London: Oxford University Press. 1919. Price $6.50.

Of course, this volume is of supreme interest to the psychiatrist, yet it can not help being of more than ordinary value to the general practitioner.

The general considerations outlined in this book are the results of observations made on 18,000 officers and men. This number is almost equally divided between those suffering from neurasthenia and shell shock and those affected by obvious mental disorders. These observations were begun shortly after the beginning of the war.

In experience, it is found that only a small proportion of the soldiers engaged in the battlefield, not more than 2 percent, became neurasthenic. Careful inquiry has elicited a family history of nervous or mental disease in 80 percent of the cases. Actual mental disease is not heritable as such; what is inherited is an unstable or disordered arrangement of the inherent structure of the nerve cells subserving mind and this allows mental affections to supervene.

In 20 percent of the soldiers who present no evidence of inherent disposition to nervous disease, the action of sudden shock alone is, in itself, sufficient to cause disassociation and disequilibrium of the delicate mechanism of the nervous system. The effect of high-explosive shells in a confined space is specially disastrous, such as, for instance, in a shell hole, between the traverses in a trench, or in a dugout. There, concussion has been sufficient, by its direct action on the abdominal sympathetic nervous system, to cause immediate death.

The author makes a distinction between neurasthenia and psychasthenia. Neurasthenia in its mental aspects is characterized by mild depression, lethargy, apathy and retardation of memory. Nervous phenomena, such as headache, dizziness, insomnia, exaggeration of both tendinous and superficial reflexes always are present. Psychasthenia is a mental state superimposed upon one of the forms of neurasthenia; it is characterized by ideas entering the mind in spite of the will power. These ideas may be followed by impulsive action. Psychasthenia is generally the result of neuropathic inheritance. It is distinguished from primary dementia by the presence of emotional activity and the absence of permanent enfeeblement of the mind.

DAVIS: "IMPOTENCY STERILITY AND ARTIFICIAL IMPREGNATION"

Impotency, Sterility and Artificial Impregnation. By Frank P. Davis, Ph. B., M.D., St. Louis: C. V. Mosby Company, 1917. Price $1.25.

As the author asserts in the introduction to his book, there are not many really helpful books on this subject. However, the physician meets these cases of sterility, and it is incumbent upon him to know what to do for them. If the family physician dismisses them without treatment, many go to the advertising specialist, with unfortunate results. The family doctor is the one best fitted to give instruction and moral guidance to the young of both sexes.

This is only a small volume of 133 pages but it contains very much of value to the general practitioner. A rationale of the sex instinct is first outlined. The special senses influence it to a great extent. The sense of smell, the voice, the sense of sight and even the sense of touch are powerful factors in the production of it.

It is found that a large number of cases of impotency are psychic in origin and can be cured by suggestion and proper treatment. Some of the physical causes are, stricture, hypertrophy of the prostate, hemorrhoids and constipation.

The burning question with a large number of patients is, sterility. The mother instinct plays a part in this. As the author says: "There is nothing more sad than a home where children are longed for and do not come." Twenty percent of our women are barren. The chapter on sterility is very practical and worth a careful perusal.

This little volume should be invaluable to the physician in general practice. If

he is a man of the right type, he should be able to benefit many of these patients that come to him for help.

PATERSON: "ANATOMY OF THE PERIPHERAL NERVES"

The Anatomy of the Peripheral Nerves. By A. Melville Paterson, M.D., F. R. C. S. London: Oxford University Press, 1919. Price $4.50.

This is a medium sized volume of 150 pages. There are 64 illustrations. Some of them are diagrams of the distribution of spinal nerves and are full-page illustrations. Others are photographs. Some are taken from Cunningham's anatomy. The names of the nerves and their branches are put in bold-face type which catches the eye and aids the memory.

There are four chapters, the first treating of the anatomy, histology and embryology of the peripheral nerves. Chapter two is concerned with the spinal nerves, their muscular and regional distribution. The third chapter deals with the sympathetic nervous system. It is very complete. The fourth chapter treats of the cranial nerves, their origin and distribution.

This volume is intended for the use of the surgeon and for those engaged in military orthopedic work. One can learn the distribution of any nerve, from this book with a minimum amount of reading. It is so condensed that one does not realize how much information it contains. It is of great service as a work of reference. Any physician, whether he be a surgeon or not, will do well to add this book to his library.

MORSE: "EMERGENCIES"

Emergencies of a General Practice. By Nathan Clark Morse, A. B., M. D. St. Louis: C. V. Mosby Company. 1918. Price $4.50.

This is a record of some of the observations and practical experiences of forty years in an emergency practice. The field is extremely wide, embracing the whole field of medicine, including toxicology, and a large field in surgery, such as, fractures, dislocations and amputations. There is also a chapter on obstetric emergencies.

The author speaks of the paraffin method in the treatment of wounds. Here is what he terms the improved technic. The burned area should be cleansed, carefully but very gently, by douching the parts with a comfortably hot one-percent solution of chlorazene. Blisters or necrotic tissues should not be disturbed. Blisters, if very large, may be partially emptied by needle puncture. Before applying the paraffin, the injured area must be carefully dried by gentle touching with sterile gauze or with the electric hot-air drier which causes no pain. The paraffin can be applied with a special atomizer or by means of a fine varnish brush.

The book is profusely illustrated and is a moderate-sized book of four hundred and fifty pages including the index. It contains much that one could not find in any ordinary textbook. It really fills a valuable niche in the physician's library. It is a valuable work of reference in many emergencies where there is little or no time to decide upon a course of action.

DAVIS: "MANUAL OF OBSTETRICS"

Manual of Obstetrics. By Edward P. Davis, A. M., M.D. With 163 illustrations. Philadelphia and London: W. B. Saunders Company. 1919. Price $2.25.

This is an excellent manual of 477 pages, well printed, well illustrated, and well arranged. The text is very comprehensive and complete and all the methods of procedure have been evolved from the author's own experience. A large number of textbooks are too often compilations from many sources, in which one has to wade through many pages to find something of value. It is preferable to have a one-man textbook, particularly if he is a man of large practice and sound experience.

It is interesting to observe that the auththor consider pituitary substance a dangerous drug unless it is used with care. Many physicians have come to the same conclusion. If too large a dose is given, the action of the drug may itself cause a laceration of the perineum. In the opinion of the Reviewer, it is safer to use forceps in many cases in which pituitrin is indicated.

The dangers of forceps are emphasized, however. Among the many accidents due to the improper use of forceps are, lacerations of the cervix uteri, blindness due to slipping, wounds of the scalp, laceration of the perineum. Forceps should not be ap-

plied unless the cervix is sufficiently dilated. The membranes must be ruptured. Indeed, to know when and how to use forceps requires the greatest care and foresight.

Of course, there are natural differences of opinion about the use of chloroform or ether in obstetrics. Ether is the preference of the author. Many find chloroform an ideal anesthetic in obstetric practice. However, that is not important. The book is cordially recommended to the consideration of the physician who practices conservative obstetrics. It constitutes a practical and safe guide to follow.

"LABORATORY NOTES"

Johnson & Johnson, of New Brunswick, N. J., have sent a copy of their Laboratory Notes No. 2, this being a record of some of the splendid work done by its scientific department staff, under the direction of Dr. Frederick B. Kilmer. The book contains much that will interest physicians. It is beautifully illustrated, very attractive, and contains evidence of most painstaking work.

We suggest that any physician who is interested write to Johnson & Johnson for a copy.

CHANCELLOR: "THE HEALTH OF THE TEACHER"

The Health of the Teacher. By William Estabrook Chancellor. Chicago: Forbes and Company. 1919. Price $1.25.

Doctor Chancellor is a department head at the College of Wooster and is well qualified to write such a book. He was educated in medicine. As superintendent of schools in Washington and other large cities, he has had a favorable opportunity to study the special health needs of teachers. He is also known as an expert in court cases involving health and mental conditions.

This book might very well be called a health manual for teachers. It is divided into two main parts. One is entitled. "Principles of Diagnosis and Cases." It helps the teacher diagnose his own case and gives concrete cases to exemplify the condition present. The second part, "The Rationale of Health Control," treats only of things necessary for the preservation of health. Such subjects as sleep, diet, drink, exercise, bathing and the like are considered. This book contains hygienic methods for the prevention of disease, and advises the teacher how to be, and keep well. With good health, comes efficiency and enjoyment of his profession.

Teachers are not likely to think of themselves as a rule. They should pay more attention to the art of keeping well. For, it is infinitely better to prevent disease by living according to the laws of hygiene and common sense than to pay a doctor good hard cash to get you well. Every teacher should put this book on his reading list. He will find it well worth his while.

PETERS: "CHEMISTRY"

A Textbook of Chemistry for Nurses. By Fredus N. Peters, A. M., Ph. D. St. Louis: C. V. Mosby Co. 1919. Price $1.75.

The author has succeeded in producing a practical and interesting manual which not only is very well adapted to the needs of nurses but also could be used in undergraduate and premedical schools. The practical applications of the subject have constantly been kept in mind, which stimulates the interest of the student and makes it easy to learn a subject that is usually considered dry and uninteresting.

Among the best features of the book are, the outline at the beginning and the exercises for review at the end of each chapter. The exercises are especially valuable to the student in testing his knowledge and leading him (or her) to reason things out for himself.

The chapter on poisons is excellent and the most important part of the whole book. It should be carefully studied. The author and publisher have produced an excellent manual which deserves unqualified praise.

Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

Queries

QUERY 6476.—"Sloughing of Skin-flaps After Amputation." F. C. D., Minnesota, is treating a man, who, three weeks ago, had his arm cut off below the elbow joint, in a corn shredder. This was sewed up at the time of the accident but all the skin over the end of the stump sloughed and now is a "rotten stinking mass." He wants to know how best to treat this with chlorine-bearing antiseptic preparations; such as, chlorazene or dichloramine-T. There is a good bit of sensitive granulation tissue, now, over the end of the stump.

From the very limited data at our disposal, we are inclined to believe that reamputation will be called for, otherwise you are likely to have a most unsatisfactory stump.

Should further amputation be necessary, we certainly should first secure more favorable local conditions by the persistent use of chlorazene solution and dichloramine-T dressings. It is just possible that, under such applications, especially if downward tension is made upon the upper tissues, a satisfactory cicatrix may be obtained; but if, at the present time, the flaps are a "rotten stinking mass," it is most unlikely that any step less than reamputation, at a higher level, will give this patient a painless and useful stump.

Before commencing the use of chlorazene, thoroughly remove all necrotic tissues, then irrigate the parts with a one-percent solution two or three times a day, and in the intervals use a wet dressing, that is, gauze saturated with 1-2-percent chlorazene. After a few days, when conditions have cleared up materially, commence the use of dichloramine-T.

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QUERY 6477.—"Endocarditis?" A. S., Missouri, forwards the urine of W. S., male, aged sixteen years, for examination, and gives the following history:

"Height, 5 ft. 2 in.; weight, 95 pounds. Urine passed in twenty-four hours, two and a half pints. Food he is taking: milk, cream, custard, crackers, butter, fruits (oranges and apples). Drugs: tincture of digitalis, ten drops in water every six hours; intestinal antiseptics, fl. ext. cascara.

"Patient has been very delicate all his life. Always complained of weakness and muscular pains. Was called to see patient for the first time on December 6, 1919. Diagnosis: muscular rheumatism, complicated with chronic endocarditis and hypertrophy.

"Symptoms: Fever every day for six weeks, rising each day to 101° or 102° at night; pulse range from 90 to 100, irregular. Respiration rate showed a steady rise: 28 for four or five days, 30 for the succeeding two days, and 36 for the past twenty-four hours. No pains. Slight epistaxis almost every day for the last six or seven days. Sweats mostly on forehead. Soreness in muscles. Severe palpitation of heart. Blood pressure, 110, systolic. Red spots on abdomen; also on soft palate of mouth, the size of a pin-head. Notice today for the first time, on his hands and chest, many little brown dots or spots. Sleeps most of the time but is easily aroused. No headache. No flushing of the face. Skin, dark in color; finger-nails, pale. No vomiting during the course of his illness. Retention of urine for seven hours yesterday, but, since then, he passed two and a half pints of urine. (Enema of sodium chloride solution was given him). No inflammation in any of the joints at any time. Family history good. The lungs show a slight dullness on right side.

"January 17, p. m.: The fever has gone

down to 100°; there is great debility. What is your diagnosis?"

The report of our pathologist upon the specimen of urine shows albumin present to the extent of 3.72 Grams, hyaline and granular casts, cylindroids, many bacilli coli, staphylococci and a few streptococci; also very many large urates, red blood corpuscles, renal and pus cells, together with a moderate amount of blood and indican and skatol. The acidity was 41 degrees.

Frankly, Doctor, it would seem that your patient is in an extremely serious condition and the prognosis should be guarded. The appearance of petechiæ upon the abdomen and soft palate, together with retention of urine (relieved by an enema of sodium chloride), considered in conjunction with the respiratory and cardiac rate, must be regarded as distinctly ominous.

Naturally, as one reads the history, the idea of a possible typhoid obtrudes itself, yet, the typical rose spots would have made their appearance earlier and would not have been pin-head in size; neither would you subsequently find the "little brown spots" or dots. We must therefore regard these as purpuric petechiæ.

Under the circumstances, we hesitate to offer therapeutic suggestions. However, it might be desirable to place this young man in the wet-pack, guarding the heart meanwhile with strychnine, and then push arbutin, in combination with hexamethylenamine, while administering medium doses of an autogenous bacterin.

Nuclein also might be administered with great advantage and we would wash out the lower bowel once every twenty-four hours with normal saline solution. We would administer digitalis very carefully in this case, and believe you would get better results from sparteine.

(Editor's note: Case terminated fatally.)

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Query 6478.—'The Violet Rays in Burns." E. B. A., New Jersey, while discussing the wax (parresine) treatment of burns, writes:

"The hot-air drier ordinarily used disturbs the abraded and delicate tissues, producing a momentary hyperalgesia. I find the violet rays much better. These will evaporate the moisture almost as quickly as the hot-air drier. They are germicidal, reestablish capillary circulation and encourage the process of repair. They exert an analgesic effect and you will be compensated with a grateful smile from the patient."

We thank you sincerely for this suggestion and, at the earliest opportunity, will employ the violet ray in place of hot air in preparing burns for the application of parresine. We trust that others also will try the rays and report their experience. Unfortunately, however, in a great majority of cases, the violet ray is not available, whereas practically any physician can equip himself with the hot-air apparatus.

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Query 6479.—"Urticaria." J. C., Washington, writes: "Please outline an effective treatment for urticaria. Probably, you do not regard this as a distinct disease; but, rather, as a local symptom of some other trouble—indigestion, and such. I have thus regarded it until recently, but, I have seen two cases within the last three years that seem to baffle all attempts at a permanent cure. I will tell about one of them.

"Female, forty-five years old, weight about 155 pounds; general health good, menses normal. About six months ago, she had her first attack of 'hives' which appeared in large wheals, some of them disappearing soon but most of them becoming hemorrhagic. The 'itching' is intense and refuses to be allayed. After about four weeks, the eruption gradually subsided, but, it reappeared two weeks ago. It is now considerably better, in fact, is not bothering much at present; still, its 'persistence' has created a respect for 'hives' that I never felt before. It is now about at the head of my list as a tormentor of humanity. I respectfully suggest that the next edition of the "Practice of Medicine" contain a complete chapter on 'hives'. It is the little things that really count in practice and when these 'little things' become so important as to make you at least want to begin their name with a capital and say it with awe and reverence, and 'in a low breath,' then it is time to reclassify them."

We note with sympathetic interest your extremely unsatisfactory but not at all unusual experience with urticaria.

As you evidently are aware, the eruption may be due to any one of half a hundred systemic disorders. It unquestionably is more common in the female sex. Occasionally, an individual predisposition seems to exist, but, in this writer's opinion, in

practically every instance, gastric and intestinal derangements exert a potent contributory influence. Some individuals suffer at the change of seasons, while others erupt after the ingestion of some particular kind of food.

The present writer once had under treatment a woman in whom the eruption invariably appeared after a mental storm (unfortunately, this particular individual was "storm-tossed" most of the time), such mental disequilibrium being followed by a sharp toxemia, and within forty-eight hours by an urticarial eruption.

It should be borne in mind, always, that a patient suffering from malaria or diabetes is very apt to present urticaria. However, the most recent investigations seem to prove our theory that an underlying toxemia, usually of intestinal origin, may be regarded as the *causa causans*.

We have secured the best results from the administration of blue mass and soda, gr. 1-2, with podophyllin, gr. 1-6, half-hourly for four to six doses every third night, and followed the next morning with a saline. Three times a day, between meals, we give the carbonates of lithium and calcium, with colchicine, and, with each meal, ten drops of dilute phosphoric acid in a glass of water. After the first nine days, the blue mass and soda may be discontinued and some such preparation as podophyllin and sulphur administered before meals.

In very many cases, full doses of B.-bulgaricus bouillon, or galactenzyme tablets, with a little milk or milk and water, morning and night, will exert a distinctly beneficial effect.

The skin should be sponged morning and night with a solution of magnesium sulphate.

After thorough elimination has been secured, zinc phosphide will, in certain cases, act with almost magic celerity, 1-64 to 1-32 grain every three or four hours for a day or two being the ordinary dosage.

We will endeavor to cover this subject more fully in CLINICAL MEDICINE in the near future.

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QUERY 6480.—"Intestinal Indigestion?" F. E. M., California, has a patient, female, aged thirty, no children or pregnancies, who gives a long history of fermentative indigestion with bloating. She was operated on a year ago for chronic appendicitis. The appendix was found to be elongated and showed signs of past inflammation but there was no other pathological condition noted in the pelvis. Otherwise, the history is negative. Frequent urine examinations during the past year were negative. Lungs and heart are normal; the patient is in good flesh, with a small amount of gain recorded since the operation.

This patient complains of numbness, tingling aching in arms and shoulders, especially at night; also, she complains of bloating and pain over the abdomen generally, especially at night.

Frankly, Doctor, you have confronted us with one of the most difficult problems presenting in medical practice, and, as you can very readily understand, it is all but impossible for one not thoroughly familiar with the case to express an intelligent opinion as to the probable *causa causans* of the symptoms of which your patient complains.

It is just possible that you have to deal with a cholecystitis or chronic ulcer of the duodenum. On the other hand, there may be an "intestinal kink" or simply gastroptosis, with an atonic condition of the intestines themselves. The "numbness, tingling and aching in arms and shoulders" may be merely an evidence of autointoxication of intestinal origin or indicate a general disequilibrium of the nervous system with vasomotor disturbance, which again may be responsible for the abnormalities in the digestive tract.

We note that this woman is thirty years old and never has been pregnant. Of course, there may be no connection whatever between her barrenness and the disorder from which she complains. On the other hand, we would be strongly inclined to think that there is such a relationship Examine her carefully and find out something about her sexual life.

If there is any congestion of the pelvic viscera, dilate the cervical canal and use copious hot douches frequently, with some such depleting agent as a combination of glycerin and magnesium sulphate in the form of a suppository.

On general principles, of course, massage of the abdomen and the wearing of a snugly fitting abdominal belt, careful dieting and the administration of some such combination as: papain, gr. 1; pepsin, gr. 1; berberine hydrochloride, gr. 1-32; extract gentian,

gr. 1, before meals; and one or two tablets containing: pancreatin, gr. 1-2; papain, gr. 1-2; diastase, gr. 1-2; bilein, gr. 1-32; strychnine sulphate, gr. 1-128; ginger, gr. 1-4; charcoal, (vegetable), grs. 2 1-2; sodium bicarbonate, gr. 1, an hour after taking food, should prove beneficial.

Very small doses of strychnine valerate and sparteine might relieve the tingling and aching, of which she speaks, but only after thorough elimination has been secured in fact, we would start treatment with small doses of calomel and podophyllin, at night, followed the next morning by a saline; then, after a week or ten days, give mineral oil (an ounce on rising in the morning), and place the patient upon a carefully regulated diet.

We would also recommend sponging the body, before retiring, with Epsom-salt solution, and, once a week, would apply the faradic current to the spine.

As soon as thorough elimination has been secured, commence the use of the other remedies recommended and persist in treatment for several weeks. Instruct the patient in deep breathing and be very positive in your suggestions. If her domestic surroundings are not thoroughly satisfactory, suggest a visit to some relatives. In very many of these cases, as you are aware, a complete change will work wonders. Later on, when this patient materially improves, put her on some active preparation of the bacillus bulgaricus, and insist upon her continuing its use for a prolonged period.

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Query 6481.—"Mammary Tumor," S. C., Iowa, has under observation a woman patient, about thirty-seven years of age, married, two children, who for about a year has noticed some induration of both mammary glands; showing some hardness and being painful upon pressure; while it is not of a suppurative type or a mammitis. The breast is soft around the areola, and there is more hardness and induration at the base of the mammary glands. No nodules or any irregularity of the hardened portion can be detected.

"I am," he says, "inclined to believe it to be of a fibroid character. I presume, if cancerous, there would be more soreness upon pressure; also, there would be tumefaction with redness. There is some dull pain locally, with some pain between the shoulders; the mammary glands are small in size.

"If the lesion is fibroid, would iodized calcium and phytolacca prove beneficial, or, both glands being involved and the hardened areas of large size, would surgical measures be more satisfactory?"

The old surgical maxim "any lump in a woman's breast is better out than in" may be said to apply to benign as well as to malignant conditions and we are strongly inclined to agree with the dictum of Keene that excision is the safest course to pursue in virtually every instance.

Of course, it is essential that the character of the growth be definitely ascertained and, in this particular case, (bearing in mind the danger of delay should there be a malignant tendency) we would strongly advise that you promptly refer your patient to some experienced surgeon for consultation.

From the description given us, it is quite impossible for us to decide whether you have to deal with cystic disease, adenoma, adenofibroma, or a more serious condition.

However, in cysts with intracystic papillomatous growths, there is nearly always some discharge from the nipple and, although such cysts may remain benign for a long period, they have a tendency to become malignant.

Adenofibroma appears more usually in the breast of women between the ages of fifteen and thirty. On palpation, the growth is smooth, firm and elastic. There is no pain. Usually, it is unilateral. About ten percent of such growths undergo malignant degeneration. Early excision of the growth itself is the correct procedure.

It is hardly likely, under the circumstances, that internal medication could prove beneficial, though, of course in certain forms of mastitis, we might expect good results from the administration of iodine, phytolacca, and similar remedies.

We shall be pleased to hear further from you relative to this case.

Accurate Dosage

TO secure the best results from the use of yeast as a therapeutic agent, it is necessary to have yeast of unvarying strength. The uniformity of Fleischmann's Compressed Yeast obviates the objectionable features of yeast in other and less dependable forms.

Fleischmann's Compressed Yeast is a pure culture of the species Saccharomyces Cerevisiae; it is scrupulously protected in production and in subsequent treatment from contamination by wild yeast or other impurity; it is universally available, being sold in practically all grocery stores. It is always sold in the standard tin-foil, and the certainty of uniform reaction enables the physician to use scientific precision in prescribing the dosage.

In the series of tests made at the laboratory of Physiological Chemistry of the Jefferson Medical College, the Philadelphia General Hospital, and the Roosevelt Hospital, New York, the dosage was usually a cake of yeast three times a day, either before or after meals, administered in a suspension of water, fruit juices or milk.

Fleischmann's Compressed Yeast can be secured fresh daily in most grocery stores. Or, write The Fleischmann Company in the nearest large city, and it will be forwarded direct on days wanted.

An interesting book on yeast therapy will be sent to physicians on request.

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Fleischmann's Compressed Yeast

News Notes Department

Who wants to engage in the summer hotel business, or operate a sanitarium? An opening is advertised in our pages this month, by Wm. H. Wilson & Co., realty dealers of Philadelphia. They offer for sale a country property, consisting of a lodge and five cottages, with nearly sixty acres of farmland, woodland, and lawn. From the description we would think it very well suited for the purposes named, especially since it is close to one of the largest cities in the country. For that matter, there is the whole populous east seaboard adjoining from which to draw a patronage.

For those who have entertained the idea of retiring from medical practice, and with a competence earned to project a hostelry for the sick or for the summer holiday-maker, this is an opportunity. All details as to price, terms, and so on may be had by writing the realty people named. The proprietor, it is said, is going to California to make his home, and it is likely the property can be had at a favorable figure.

Anything remedial that promises success in the treatment of prostatic disease may well be investigated and it is likely that the one or the other of the two offers made by the Regent Drug Co., of Detroit, Mich., in this issue, will be accepted by many of our readers. Both comprehend a supply of their suppository, especially designed for treatment of prostatic ailments, and a working textbook on the subject, which brings out facts bearing on prostatic therapy that may be new to a good many.

Excellent results are said to attend the use of this suppository in suitable cases. Those who now have on their hands cases which require medication of this sort, in view of the strong recommendation of the company in question, may do well to try these suppositories out, employing them along with massage where indicated. At best these are rebellious cases, indeed hopeless cases, for the general practitioner, and little success is possible in their treatment save by those who make prostatic therapy the subject of some special study.

Since the great war, several changes have taken place in the affairs of some well-known pharmaceutical concerns; interests have changed hands and new firm names indicate new ownership, from which the teutonic feature is removed. Thus Veronal, by which name diethylbarbituric acid was introduced and sold in pre-war times, is now being of-

MERCURIAL (GREY) OIL

One of the New and Nonofficial Remedies. A valuable adjunct in the treatment of syphilis. Put up in syringes, each syringe containing 10 doses. Credit of 50c upon return of syringe. Pamphlet sent upon request.

$1.50

National Pathological Laboratories

(Incorporated)

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University Club Bldg.

NEW YORK
18 E. 41st St.

DETROIT
Smith Building

BROOKLYN
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Try Pepsodent

Ask Us to Send a Tube

It contains activated pepsin to act on the albuminous plaque.

It contains tricalcic phosphate—a polishing agent uniquely efficient. Yet natural teeth have been brushed with it 200,000 times without harm.

It is acid in reaction, so it stimulates the flow of alkaline saliva.

It contains no soap, for soap is alkaline.

Pepsodent is bringing about a new era in oral hygiene.

Five years of clinical and laboratory tests have confirmed every expectation.

It now has at least a million users, due largely to dental endorsement.

150,000 people monthly write us for sample tubes.

Every doctor should prove it for himself.

Pepsodent PAT. OFF. REG. U.S.

Dental Mucin Digestant

Based on activated pepsin

Contains no soap, no chalk

254

THE PEPSODENT COMPANY,
5419 Ludington Bldg., Chicago, Ill.

Please send me, free of charge, one regular 50c size tube of Pepsodent, also literature and formula.

Name .....

Address .....

Enclose card or letterhead

fered to the profession by the Winthrop Chemical Co., of New York. A half-page announcement of theirs appears this month in this and other leading medical journals.

The world needs hypnotics that is certain, and in the present stressful day has never had greater need for them. An increasing number of patients stand in need of artificially induced sleep and sedation; from year to year the nervous-hysteric class grows larger.

This company produces other medicinal chemicals besides the one referred to, although they are less well-known, among them Sajodin, an iodine preparation which they recommend for all such cases as call for the iodides, claiming it is better borne than the latter; also, Helmitol, a urinary antiseptic. Those interested may have printed information on request.

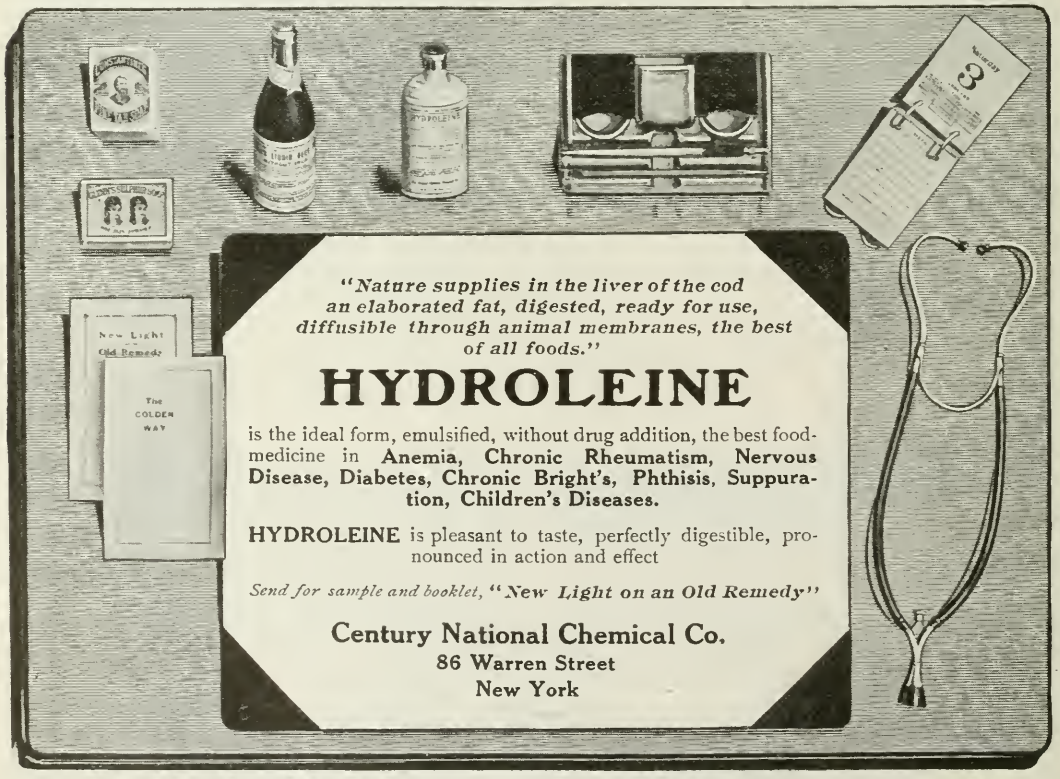
The prevailing epidemic of influenza and pneumonia will no doubt serve to draw attention more and more to the importance of acidemia or acidosis in such diseases. The statement has been made by an excellent authority that pneumonia patients really die from acidosis. A reduction of the normal alkalinity of the blood always favors pathological changes. It is coming to be recognized that diminished alkalinity of the blood is brought about by several different factors operating, among which is the retention of acid products of tissue or food katabolism. This suggests therefore, not only the administration of proper alkaline agents, but also of mild eliminants; such a combination for example, as is supplied in the form of Thialion. Thialion is not by any means, a new or untried product, having been on the market for a number of years and given satisfactory results in the treatment of what used to be called uric acid manifestations. Thialion is said to be pleasant to take, efficient in action, satisfactory in results.

A sample and literature may be obtained by writing to The Vass Chemical Company, Danbury, Conn.

Orificial surgery is that branch or division of the healing art which recognizes the special importance of the independent function of the sympathetic nervous system, and teaches the diagnosis treatment and repair of defects of the sympathetic nerve itself or defects of other tissue causing functional derangements of the sympathetic nervous system.

It was Pratt, who gave prominence to the fact that irregularities in the functioning of the sympathetic nervous system can often be controlled or corrected entirely or in part by orificial work. A great impression upon the nervous organism can be made thus, by correcting defects at or about the anal orifice, even the slightest and seemingly the most trivial, as he demonstrated in his crowded Chicago clinics, and quite remarkable results were had, and are still had, by the orificialists.

Their belief is strong that many nervous conditions of the chronic sort, or invalidism and ill-health, in which the cause is problemati-


"Nature supplies in the liver of the cod an elaborated fat, digested, ready for use, diffusible through animal membranes, the best of all foods."
HYDROLEINE
is the ideal form, emulsified, without drug addition, the best food-medicine in Anemia, Chronic Rheumatism, Nervous Disease, Diabetes, Chronic Bright's, Phthisis, Suppuration, Children's Diseases.
HYDROLEINE is pleasant to taste, perfectly digestible, pronounced in action and effect
Send for sample and booklet, "New Light on an Old Remedy"
Century National Chemical Co.
86 Warren Street
New York

Every Step

in the process of making

Grape-Nuts

has a distinct purpose which the doctor will promptly recognize as good food chemistry. Such steps are:

—the definite mixture of wheat and malted barley with the resulting action of diastase.

—the baking processes covering 20 hours under controlled conditions for the more perfect conversion of starches.

—the granular form of the finished product with its requirements for chewing and consequent ptyalin action of the saliva.

This everyday food, therefore, is unlike the average cereal and it especially deserves the recognition of physicians because of intrinsic worth based upon scientific fact.

All Grocers Sell Grape-Nuts

Samples of **Grape-Nuts, Instant Postum** and **Post Toasties** for personal and clinical examination, will be sent on request to any physician who has not received them.

POSTUM CEREAL COMPANY
Battle Creek, Michigan

cal and nothing seems remedial, are set up reflexly by provocation at the anal orifice. The subject is interesting to many, who may like to know that the School of Orificial Surgery at Des Moines, Iowa, is now enrolling for the summer clinic. The post-graduate course consists of twenty-three lectures.

For preparing an antiseptic solution suitable as a vaginal douche, for that host of women afflicted in this day more or less grievously with leucorrhea, and for ordinary need to keep the vaginal tract clean, the enterprising chemist and pharmacist have given us some excellent things. One of them is Tyree's Antiseptic Powder. It is not new, having been advertised to doctors for about two decades; but lacking the feature of novelty it has at least the feature of age, tried and still prosperous.

It is said to be efficient against the germs which commonly inhabit the vaginal tract and yet neither poisonous nor irritating to skin or mucosal tissues, and safe therefore to entrust to one's patient for routine use. Two tablespoonfuls to a douche-bag of water is the quantity advised for solutions.

If without yielding efficiency, at least as afforded by phenol or bichloride, we may have an antiseptic agent or compound of agents that is safer to use than they, the choice would be easy to make. Whether Tyree's Antiseptic Powder measures up to requirements can be determined by inquiry and clinical trial, for which samples are presumably available on request.

The average doctor is interseted in electrotherapeutics and has equipment of one sort or another in his office for treating suitable cases by application of the electric current. Some are very well informed on the subject and have read the larger textbooks devoted to it, finding this therapy of large and absorbing interest. Others are mildly interested in it and while recognizing electricity as being useful in a limited way, yet too much so to ignore, are willing to give but a small part of their time. Without engaging the subject too seriously, they are ready to welcome and to read any small working abstract which will carry the essentials to them, such for example as the pamphlet being distributed by the Thompson-Plaster Co., of Leesburg, Va. This is free upon application, we understand. It is primarily meant to promote the sale of a high-frequency outfit manufactured by the company but we learn it is sufficiently informative in general to be worth writing for.

The company makes and sells a variety of appliances for the doctor's office, all of which are described in the pamphlet referred to; they specialize however in appliances by which the high-frequency current may be employed to the best advantage.

The employment of Chlorazene solution as a gargle or spray, for topical application in the pharynx and nostril, has but one inconvenience, for some patients, and that is, the chlorine odor to which many persons object. In order to overcome this difficulty, The Abbott Laboratories

WHY CLUB A COUGH

or attempt to overcome bronchial irritation and inflammation by outraging the stomach with nauseous expectorants or "Knock down" narcotics? Oil taken into the stomach, reflexly stimulates bronchial secretion, relieves congestion, soothes cough, does not disturb digestion, nor mask other symptoms.

TERRALINE

(Petroleum Perification)

is medicinally pure petroleum oil, palatable, without action upon digestion and prompt in its influence upon the respiratory tract. It soothes cough and subdues irritation. TERRALINE is also mildly laxative, when used as an intestinal lubricant. It is an ideal vehicle for many medicinal agents. It is intended for physicians prescribing only, and for the convenience of the physician is put up Plain, with Heroin, or with Creosotes.

In spite of the use of arrhenic compounds authorities advise the "follow up" treatment with mercury and often iodide in luetic conditions.

PIL MIXED TREATMENT (CHICHESTER) is a perfectly balanced, dependable formula containing mercury and KI, well tolerated, active and efficient.
Sold in bottles only—never in bulk. Price $1.00 per bottle.

Hillside Chemical Company

Newburgh, N. Y., U. S. A.

The Prevention of Influenza and Other Infectious Diseases

The health authorities have emphasized the great importance of faithful attention to the personal hygiene in preventing influenza and associated infections. Especially do they lay stress on frequent disinfection of the nose and mouth, together with effective cleansing of the hands.

For accomplishing these all-important ends, there is probably no antiseptic or disinfectant that is used more extensively or has been found more useful, convenient or effective than

Dioxogen

Pure, non-irritating, non-toxic, tasteless, colorless, yet more effectual in germ-killing power than the usual carbolic or bichloride solutions, Dioxogen has the great advantage of assuring safety with maximum germicidal potency.

The routine systematic use of Dioxogen in countless hospitals, homes, offices and factories, as so many physicians have recommended, will unquestionably prove of very great help in preventing the development of influenza and other acute infectious diseases in innumerable cases.

Nose and Mouth Disinfection

One part Dioxogen to six or seven parts of warm saline solution is a remarkably effective gargle or nasal douche.

Hand Cleansing

After washing hands with soap and water, apply a solution of Dioxogen and warm water—equal parts. Rub in well, especially around the nails.

THE OAKLAND CHEMICAL CO.
59 Fourth Avenue, New York

have put up an aromatic Chlorazene powder which is as pleasant to employ as its action is effective and reliable. Aromatic Chlorazene Powder may be used wherever a local antiseptic is called for. From it, solutions for gargling, for nose spray, etc., can be prepared; also, for vaginal douches and for the purpose of washing out superficial wounds, although here the question of odor does not enter so emphatically.

The various Chlorazene preparations put up by The Abbott Laboratories possess a great many virtues that have been discussed widely. It should not be forgotten that the chlorine-carrying antiseptics not only belong to the most efficient bactericides but also have the great advantage of being the least organotropic; that is to say, have the least tendency to injure the tissue cells. In external applications and on application to the accessible mucous membrane, the organotropic action is nil. Consequently, it may confidently be claimed that the Chlorazene preparations are positively harmless. Send for literature, Doctor, and be sure to investigate these important remedies.

Where a medicinal fat is required, for impoverished patients, in whom loss of weight and suboxidation are outstanding features deviating from normal, cod-liver oil is still quite highly regarded, although the newer vegetable fats or oils, as those derived from the olive, peanut and cottonseed, have now some adherents. The main objection to cod-liver oil is the fishy taste. The plain oil has this taste, even in its refined state, wherefore efforts have been made recently to disguise it with aromatics. To quite a degree the nauseating taste is by such means covered, but enough remains to give offence to the finical palate. Then, too, overload of saccharine or aromatic elements has its objection as well, in many cases upsetting the stomach.

The idea of making an emulsion of the oil was hit on by some eastern people, who call their product Hydroleine, and insist it is a most acceptable form in which to convey it to patients; the fishy taste, it is said, is not apparent and no objectionable admixture is present. Samples are offered.

Our readers will find the Balsamea Company with us again, inviting attention to their balsamic preparation, which at least would seem to merit investigation.

FREE →

A Valuable Booklet

"Sinusoidalogy, the Science of Application of the Sinusoidal Current" mailed FREE. A Post Card gets it.

The ULTIMA No. 3

SINUSTAT

(Trade-mark Reg. U. S. Pat. Office)

A Sure Help in Constipation other gastro-intestinal ailments and for treatment of under-developed, flabby muscular tissue in any part of the body. Military hospital experience has demonstrated the effectiveness of sinusoidalization. Are you "from Missouri"? Then write to

Ultima Physical Co., 136 W. Lake St., Chicago, Ill.

Acute—Specific Urethritis—*Chronic*

responds promptly and satisfactorily to the use of

Acriflavine G H Proflavine G H

Acriflavine G H and Proflavine G H possess the property of *diffusibility,* are antiseptic in urine in high dilution, inhibit development of the gonococcus in dilution of at least 1:300000; do not precipitate albumin or inhibit phagocytosis or tissue repair. In anterior urethritis, inject 3 cc. of 1:1000 or 1:1500 solution into anterior urethra, retained for 5 minutes or longer, twice daily. In posterior urethritis, inject 15-30 cc. through into the bladder, retained for 5 minutes or longer, twice daily

Acriflavine and Proflavine have been accepted by the Council on Pharmacy and Chemistry of the A. M. A. for inclusion in new and non-official Remedies.

Literature and price lists on request

HEYL LABORATORIES, INC., 437 BARRETTO STREET, NEW YORK

Testing Laboratory — Standard Oil Co. (New Jersey)

Insuring Nujol Quality

THERE can be no variation in the high quality of *Nujol.*

Each day a corps of expert chemists are required to test the contents of the glass-lined storage tanks. The Manufacturing Department cannot proceed to bottle *Nujol* until a signed report has been received from the Testing Laboratory, certifying that the contents of these tanks conform in every respect to the standard laid down for *Nujol* in accordance with the opinions of leading medical authorities.

Nujol exceeds all requirements of the United States and British Pharmacopoeias.

Sample and authoritative literature dealing with the general and special uses of *Nujol* will be sent gratis. See coupon below.

Nujol Laboratories, Standard Oil Co. (New Jersey)
50 Broadway, New York

Please send me sample of Nujol, also booklet

☐ "In General Practice" ☐ "In Women and Children" ☐ "A Surgical Assistant"

Name.....

Address.....

Since the year one or two or three, or certainly from very ancient times, the balsams of one sort or another have been recommended as remedies for catarrhal conditions of the respiratory tract. We find numerous references to them in old writings, historic and scriptural. They are accredited with having estimable remedial virtues, as applied to this class of cases.

But more recently, in 1918 in fact, a balsam of a species of leptotaenia, a drug plant hitherto unknown at least generally, was utilized by Krebs in the catarrhal sequences of influenza, with results which he expressed as very gratifying. His findings resulted in the preparation, now referred to and called by its sponsors, Balsamea, being offered to the profession. We note that it is restricted to the use of physicians, for dispensing or prescription needs.

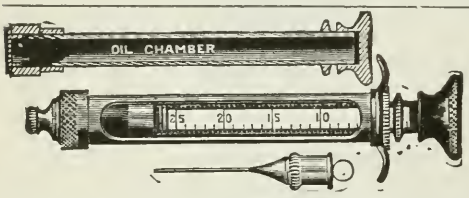
The company will, no doubt, be pleased to send samples to those who wish to try it out clinically.

Among the most troubling cases the doctor has to treat is acne. The condition is persistent, stubborn, unresponsive to most all treatment devised for it. And from the patient's standpoint it is even more troubling for the reason that it appears usually on the face, and is humiliatingly disfiguring. An acne patient prays hard for relief from this affliction; and when relief comes nobody is more grateful.

The Chicago Pharmacal Co., this month are calling attention to a remedial combination of theirs called Dermatone. They have recommended it highly for many years, and apparently are still able to do so conscientiously. It is quite effective, they affirm, in the majority of cases, relieving the condition materially if not actually causing it to vanish completely. With the persistent use of Dermatone, say they, and due regard to certain obvious dietary considerations, results are forthcoming.

We leave the matter with our readers. Clinical trial in one or two cases will tell the tale. Those who care to prove it out may have further facts and perhaps samples by writing for them. In a leaflet issued on the subject, we notice a number of commendations from users.

Dr. Mark White, 30 N. Michigan Blvd., Chicago, has contributed to *The Medical Summary* (Philadelphia) for September, an interesting article in which he epitomizes, in a way, the results of his studies concerning the



Our Hypodermic Syringes all have the new style HOLLOW Pistons which are filled with oil clear to the outer ends, so that the packing NEVER dries out, the Pistons NEVER work hard, the Syringes NEVER leak, and the oil being 5% carbolated, keeps the Syringes automatically asceptic without boiling, and, if broken, these Syringes can be repaired on the spot by the physician himself.

Pistons of old style Syringes replaced with our new HOLLOW Piston and returned promptly.

THE WESTERN SUPPLY CO. Canton, Ohio

N. B.—Send for our new descriptive Catalogue and also for free sample of our Gold Medal Special Needles.

Syrup

LEPTINOL

Formerly called Syrup Balsamea

(*From Leptotaenia*)

A near specific for epidemic influenza and its respiratory complications.

Sample sent upon request

THE BALSAMEA CO.

2590 Folsom St.

SAN FRANCISCO, CALIF.

Welch's Grapelade

the pure grape spread

GRAPELADE contains all the strength-giving qualities of the fresh ripe grapes, from which it is made. Only seeds and skins are removed from the whole grape and the acid crystals eliminated by the patented Welch process.

This leaves Grapelade a smooth, wholesome, delightfully-flavored spread for bread, toast or biscuits as delicious to the taste as it is healthful.

Grapelade has been welcomed by dietitians as a valuable addition to the invalid's tray and has been heartily recommended by leading physicians because they know it is of the same quality as Welch's Grape Juice.

The Welch Grape Juice Company, Westfield, N.Y.

physiology and pathology of the thyroid gland which he has carried on during the past fifteen years. This article, short as it is, does not lend itself readily to abstracting but should be read in the original. Suffice it to say that Doctor White has come to develop a serum which he has found therapeutically useful in the treatment of thyroid disfunctioning of various kinds.

This is very interesting. The problem of systemic irregularities connected more or less closely with the thyroid gland has come to be recognized as one of the highly important problems of the day. If Doctor White has succeeded in solving the problem, he will have deserved the thanks of the profession. We hope to hear more concerning it. In the meanwhile, we are convinced that Doctor White's serum is worthy of investigation.

The fitting of glasses has been very largely given over, in the cities, to specialists in this branch of practice; but, in the country, and the smaller towns generally, a great many practitioners are still doing this work. Perhaps many others would do their own refracting if the technic could be somewhat simplified. In this connection, the announcement of Dr. David Agnew Crawford. (Guthrie Center, Iowa) should be mentioned. He supplies a Refractometer which is said to be inexpensive, easy to use, and, at the same time, accurate. This is well worth investigating by any and all who are seeking a less complex method of refraction than the one commonly in use.

One of the interesting remedies that have not so far received the approval of the Pharmacopeia is echinacea angustifolia, a drug that deservedly stands in high repute with our eclectic colleagues. Not that it is not used by many other physicians, far from it, it is decidedly a favorite, its many indications being those of systemic intoxication, due to some

Pond's Extract

Physicians who suffer from sore chapped hands, due to constant use of powerful antiseptics, will find that POND'S EXTRACT, full strength, or diluted with glycerine, equal parts, is a most grateful lotion, especially during the winter months. It is mildly astringent and not only promotes rapid healing, but gives very prompt and satisfactory relief from the annoying soreness and pain.

POND'S EXTRACT CO., New York and London

Chapped Hands

STEARNS QUALITY FOUNDED 1855

Interesting Facts About Cascara Sagrada or "Sacred Bark"

THE Cascara tree—or to give it its technical name, Rhamnus Purshiana—ranges from ten to twenty feet in height and is found mostly on the Pacific slope. It is the bark of the tree that is used medicinally and great care must be exercised in its selection and preservation. Collected at a certain time in the year it must be carefully dried and stored.

Why Kasagra is best to Take

Kasagra is prepared by the original process from first quality Cascara bark—bark which has been carefully examined and tested by experts and stored, matured and preserved under their supervision.

Use the Original

The term "Kasagra" was coined and adopted to protect the medical profession, druggists and ourselves against preparations bearing the name "Cascara Aromatic," a title original with us. You can make sure of obtaining the original and genuine full strength Cascara Aromatic by specifying "Stearns' Kasagra" on your prescriptions.

Write for Physicians' Samples

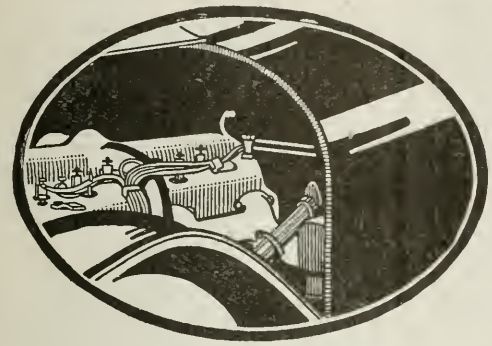
Frederick Stearns & Company

Manufacturing Pharmacists

Detroit, Michigan

In Business Over Sixty Years

VICTOR



Under the Hood

are found the vitals of the automobile —dependent on them are the usefulness and long life of the car.

So it is within the cabinet of the x-ray transformer—containing the vitals which cannot be dependent on artistic design and finish of cabinet to perform their functions.

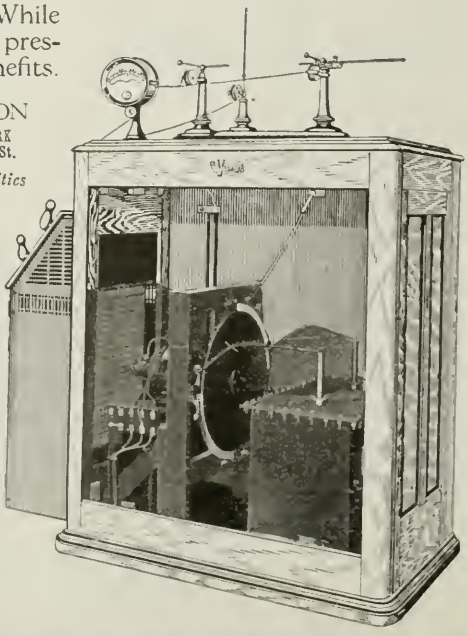
The true worth of these machines is proved only in the long run.

Victor X-Ray Apparatus is bought on the record of past performances. While we are maintaining this treasured prestige the customer obviously benefits.

VICTOR ELECTRIC CORPORATION

CAMBRIDGE	CHICAGO	NEW YORK
66 Broadway	Jackson Blvd. and Robey	131 E. 23d St.

Sales Offices and Service Stations in all principal cities



sort of infection, whether manifest and active, or latent and occult.

An interesting combination of echinacea angustifolia is offered by The Wm. S. Merrell Chemical Co., Cincinnati, under the name of Echtisia (echinacea compound). Each fluid ounce of this preparation contains Echinacea Angustifolia, gr. 120; Baptisia Tinctoria, gr. 24; Thuja Occidentalis, gr. 16; Phytolacca Decandra, gr. 16. Each drug in this compound is gathered in its prime and employed in green or fresh condition. Further data and pharmacological notes with sufficient Echtisia for clinical trial sent upon request.

From year to year patient, clever inventors continue to give us better electrical equipment for use in medical diagnosis and treatment, making changes in old prior models, improving some feature or other of the mechanism, until an end-result is achieved that seems all one could reasonably desire.

The radiographic transformer, quite a necessary equipment in any office at this time, has especially been subject to scrutiny and study with the view to making it sufficient in every detail, even to the very smallest.

Along with others in their field, the Victor Electric Corporation have reached a high plane of efficiency. They make an excellent line of apparatus, transformers and kindred apparatus. Old in the field, and widely known, they need little boosting as manufacturers of electrical helps for the doctor. Since they started, some

Confidence Begets Confidence

Our own belief in the potency of "WESTERFIELD'S TINCTURE DIGITALIS TABLETS" has shown us that we have contributed something to the medical profession of America in which we take just pride.

And in this belief, which is strengthened every day by voluntary testimony from all parts of the country, congratulating us on the enterprise and achievement of an American Pharmaceutical House, we present to the Doctors of America a Digitalis product that for prompt action and speedy results leaves nothing to be desired.

Its freedom from gastric disturbance will appeal to all physicians, and in this particular field it stands supreme.

Our confidence in our Tr. Digitalis Tablet is so great that we will send liberal sample to any part of the country on request, and abide by the Doctor's decision as to its merits.

If unable to obtain from your druggist, order direct from us.

65c per 100
$2.00 for 500
$3.90 per 1,000

The Westerfield Pharmacal Company

25 E. Second St. Dayton, Ohio

Two Points

of necessity in a doctor's office—

A Paper of Pins

and a box of

Tyree's Antiseptic Powder

One Holds and the other Heals.

The holding power of the pins you know about. The healing power of the powder is greater because it never slips out. This useful little utility will be ***mailed free*** to doctors upon request.

TYREE'S
PULV. ANTISEPTIC
COMP.
(ANTISEPTIKOS)
FROM ONE TO FOUR TEASPOON FULLS TO BE ADDED TO A PINT OF TEPID WATER AND USED FREELY TWO OR THREE TIMES A DAY
J. S. TYREE
CHEMIST
WASHINGTON, D. C.

J. S. TYREE, CHEMIST, Inc.

Washington, D. C.

The Case For Coffee

Number One

As members of what has been praised as "the most useful profession in the world," you are d a i l y called upon to advise your patients, to allow or to forbid certain articles of food or drink, according first to your scientific knowledge, and second to your practical experience. You are regarded as scientific men, hence your knowledge should be exact, true, temperate, neither influenced by hearsay nor shaded by prejudice. There are half-truths in medicine, made clever use of by certain sophists, whose motives are tinctured with commercialism. Clever effort and subtle appeal may distort fact and disturb proportions. You are called upon to differentiate in diagnosis. You should be equally able and conscientious in your analysis of the written or the spoken word. One of your great scholars has declared, "There is no authority in medicine but common sense and proven fact."

Take, for example, the case of COFFEE.

You are asked to regard it as a "dangerous" beverage, and you have been influenced perhaps to believe or to incline to the opinion that the accusations and the arguments against coffee are rational and scientifically well-founded.

But to be fair, judicial, to be true to the ideals of your profession, you owe it to yourselves and to your patients to consider *both* sides of the question, to weigh the evidence, to separate the chaff of theory from the wheat of fact, before you judge—or act.

The case for COFFEE will be presented in succeeding issues of this and other medical journals.

Copyright 1920 by the Joint Coffee Trade Publicity Committee of the United States

fifteen or eighteen years ago, numerous others have appeared in competition with them, with alleged patents superior to any, but the Victor people have held their own, with increasing sales.

They issue a large illustrated catalog which they will send to such of our readers this month who happen to be interested in this subject.

Much absurd and absolutely groundless prejudice attaches to some of the pleasurable commodities of life, without which it seems this earthly domicile of ours under the sky would be quite, or almost, unendurable, though perhaps other pleasures might be invented by the present censors of joy of which we know nothing at present. Let us hope so, since we are rapidly being deprived.

It will be a hard day for many of us when our morning coffee is legislated from us. It may come, who knows? The morning cup may soon be quite as empty as the wineglass now is, and no easier to procure than the cool commodious stein of a year or so ago. Certainly there is a prejudice against coffee, and we may infer that it is growing, from the work now being started by the Joint Coffee Trade Publicity Commission in defense against it. A page appears in this issue from this source. Many will be pleased to see coffee thus defended, and the dire designs of our purists thus anticipated. Oh no, leave us our coffee, those of us who want it! To legislate against appetite and inclination in small personal affairs is going too far, it would seem. And even those who now condone it may one day regret it from another angle. For if it will

Pneumonia and Influenza Patients

succumb as a rule from acidosis rather than from cardiac failure. In fact, reduction in the normal alkalinity of the blood and of other vital tissues is the cause as well as the predisposing element of many diseases and disorders, organic and functional.

THIALION

is antacid and eliminant. THIALION is efficient and palatable. THIALION is time proven and has been trial tested.

THIALION will be indicated in many cases met with in daily practice. THIALION, when clinically tested, will secure better therapeutic results.

For Samples and Literature Address

Vass Chemical Co., Danbury, Conn.

NOW ENTIRELY AMERICAN

MADE BY THE ORIGINAL PROCESSES

Sajodin

PALATABLE and EFFICIENT
IODIN MEDICATION

Especially for Prolonged Use as in
ARTERIOSCLEROSIS

and when Iodides disagree

Helmitol

AGREEABLE and RELIABLE
URINARY ANTISEPTIC

For Acute and Chronic Cases of
CYSTITIS, URETHRITIS

and Renal and Other Infections

VERONAL and VERONAL-SODIUM

The Well-Known Hypnotics

Sold Exclusively by
WINTHROP CHEMICAL COMPANY, Inc.
189-191 FRANKLIN STREET NEW YORK, N. Y.

LOESER'S INTRAVENOUS SOLUTIONS

ABORTING INFLUENZA

With Sodium Salicylate and Sodium Iodide Intravenously is

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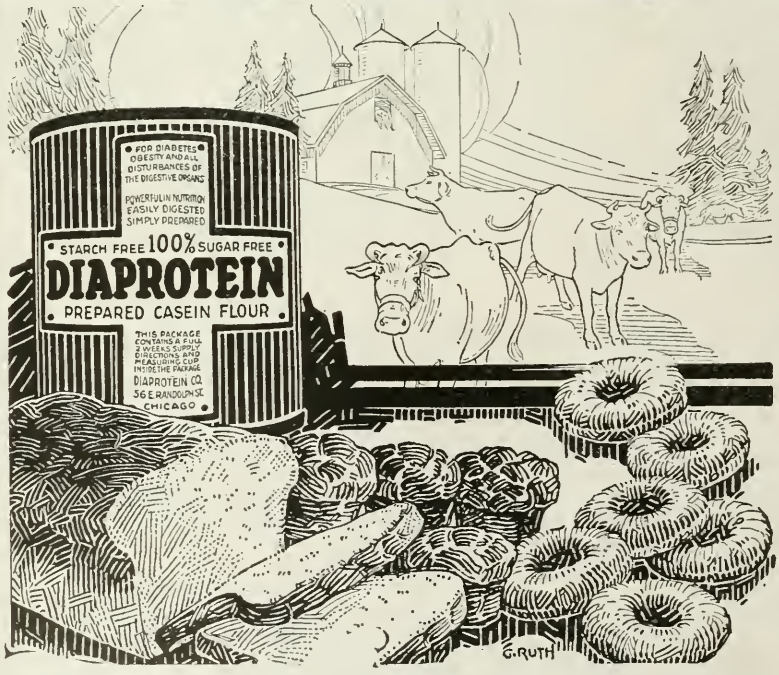
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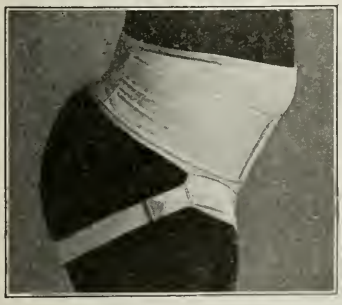

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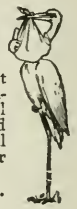

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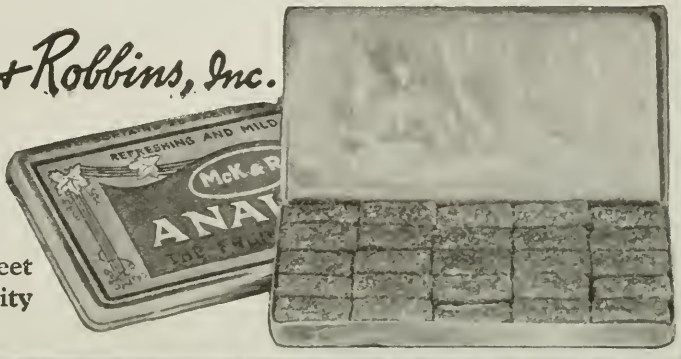

Influenza

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Mixed bacterial vaccines for the prevention and treatment of common colds and influenza were first produced commercially in the United States by the Mulford Laboratories, in 1910. Since its introduction, the formula of **Mulford Influenza Serobacterin Mixed** has been maintained unchanged.

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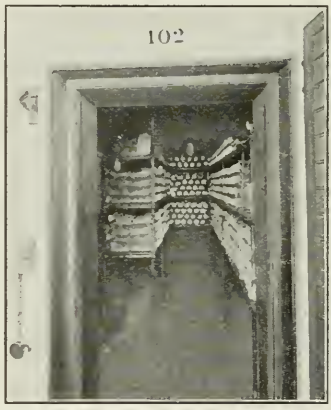

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Influenza Serobacterin Mixed is supplied as follows:	**M 109-0**—4-syringe	1 immunization.
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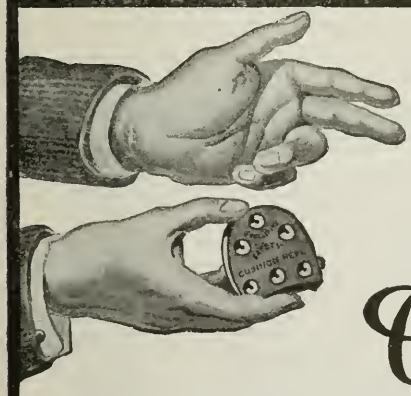

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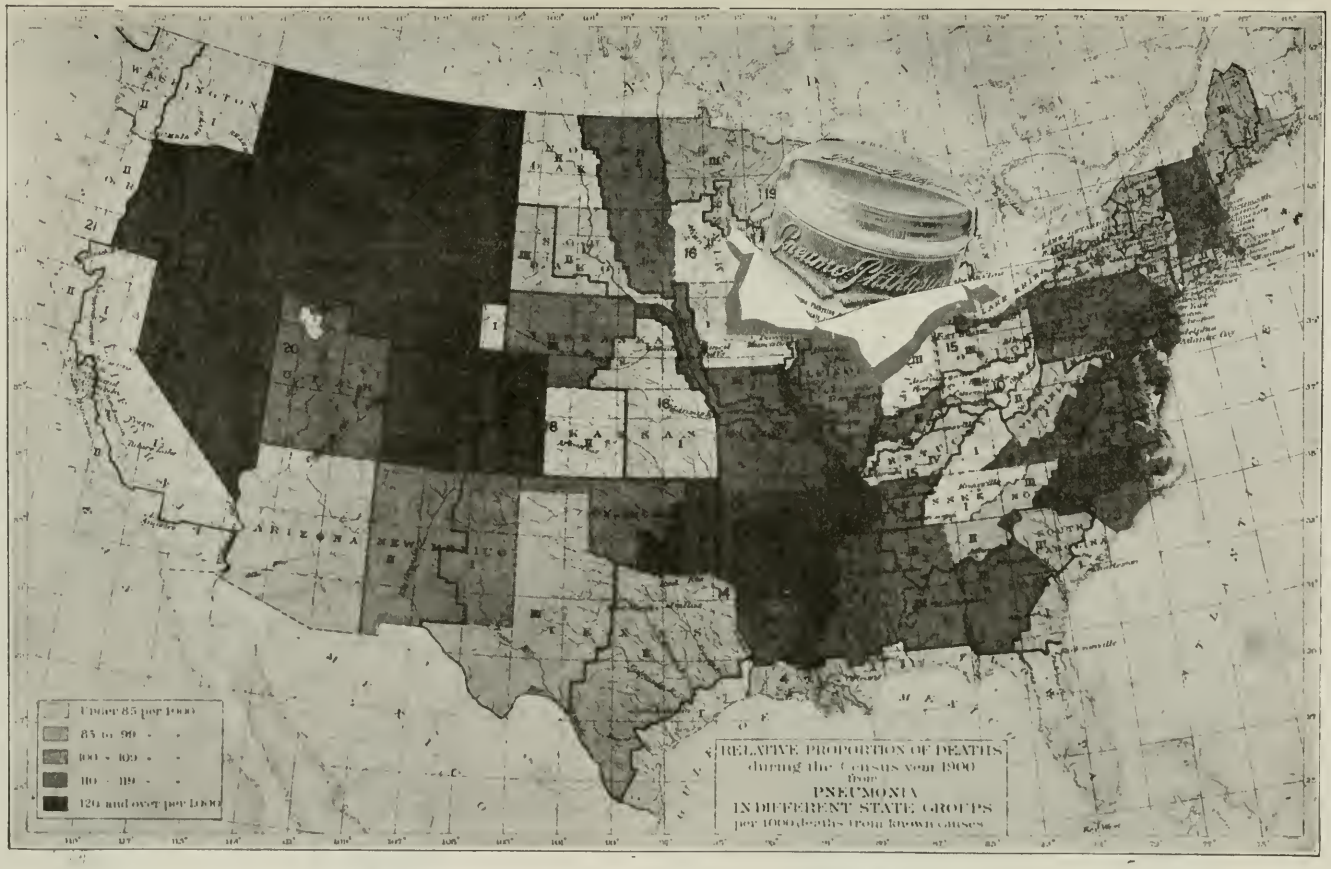
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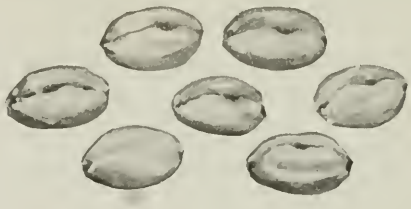

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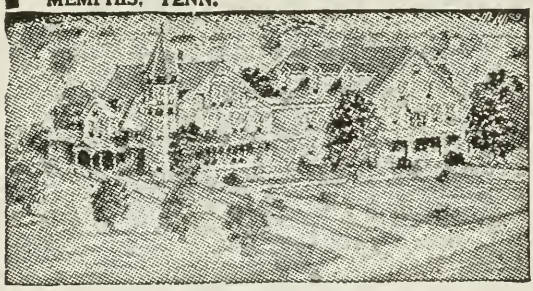

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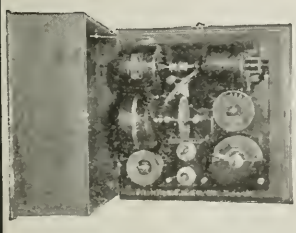

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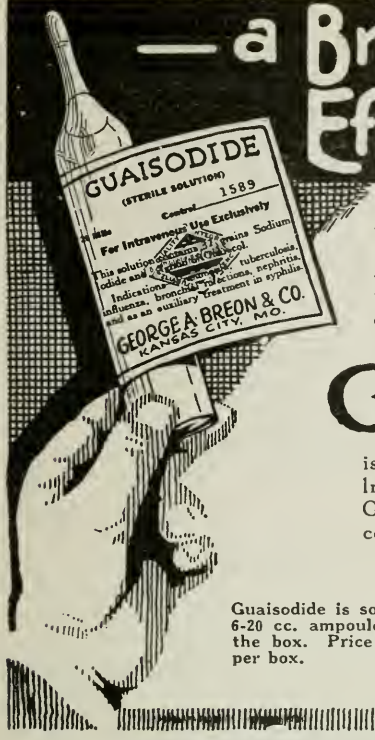

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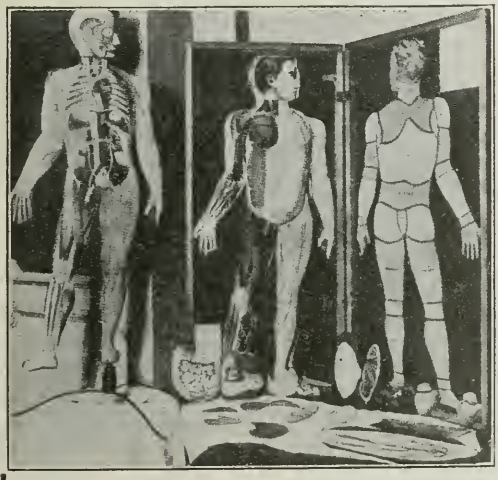

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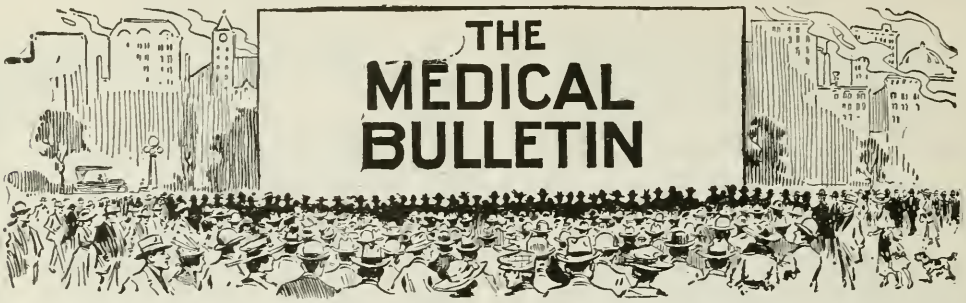

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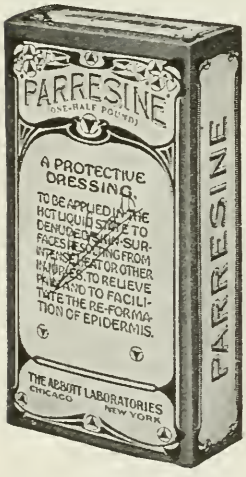
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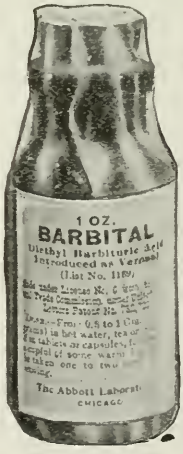

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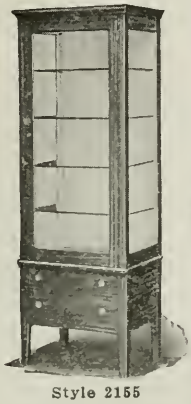

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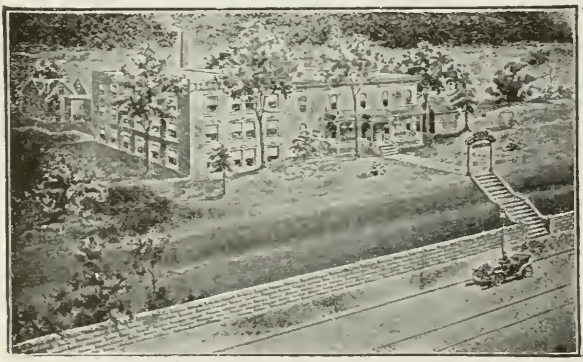

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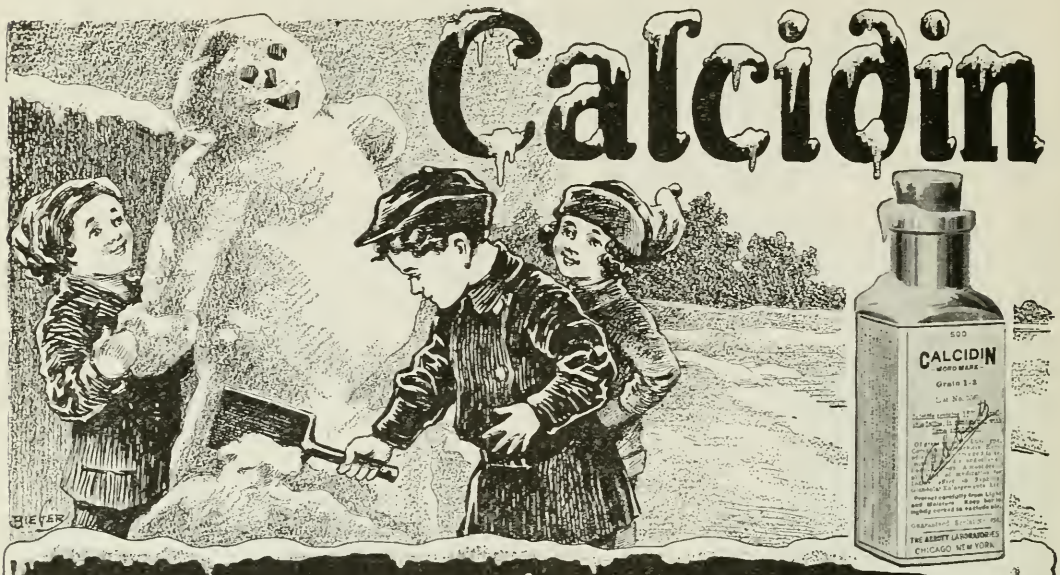

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